

# Wisconsin's Task Force on Lead Arsenate Contamination

Final Report

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*Submitted to:*

Wisconsin Department of Agriculture, Trade  
and Consumer Protection

# **Acknowledgements**

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## **Other Acknowledgements**

Portions of this report were excerpted from draft guidance on handling lead arsenate sites written by Ed Lynch, Paul Morrison, Chuck Warzecha, and Jeff Ackerman.

# Table of Contents

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Acknowledgements.....	i
Table of Contents.....	ii
Acronyms.....	iii
Executive Summary.....	1-ES
Background.....	1
Creation of the Task Force.....	1
Human Health Risks.....	5
Wisconsin’s Comprehensive Cleanup Code – NR 700.....	7
Task Force Deliberations.....	8
NR 700 Regulatory Approach for Lead Arsenate Use Sites.....	9
Findings and Recommendations.....	11
Appendix A: DATCP Historic Lead Arsenate Pesticide Contamination Task Force Proposal ...	14
Appendix B: Task Force Meeting Minutes.....	17
Appendix C: NR 700 Regulatory Approach for Lead Arsenate Sites.....	53
Appendix D: Task Force NR 700 Concerns and DATCP Responses.....	55
Appendix E: Information and Education Approach.....	58
Appendix F: Voluntary Lead/Arsenic Pesticide Addendum.....	60
Appendix G: Orchard Database -- Sample Disclosure Statement.....	62
References.....	63

# Acronyms

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ACCP:	Agricultural Chemical Cleanup Program
BRRTS:	Bureau of Remediation and Redevelopment Tracking System
DATCP:	Department of Agriculture, Trade and Consumer Protection
DHFS:	Department of Health and Family Services
DNR:	Department of Natural Resources
EPA:	United States Environmental Protection Agency
GIS:	Geographic Information Systems
NJDEP:	New Jersey Department of Environmental Protection
PPM:	parts per million
TCLP:	Toxicity characteristic leaching procedure

# Executive Summary

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Historically-used pesticides, including lead and arsenate compounds, can linger in soil and present a health risk to Wisconsin residents. Old orchard sites are of particular concern due to heavy applications of lead arsenate pesticides (lead arsenate) and the undisturbed nature of orchard soil. In Wisconsin, approximately 50,000 acres were in orchard use at the height of lead arsenate use in the mid 1900's. Some orchards from this era remain in orchard use today, some are already developed, and development pressure is increasing for many of the undeveloped sites.

Over the last several years, the Departments of Agriculture, Trade and Consumer Protection (DATCP or Department), Health and Family Services (DHFS), and Natural Resources (DNR) have been working to find an approach for managing the contaminated soil at old orchards that will simultaneously protect human health, promote the collection and sharing of data, and allow for economical solutions at contaminated sites. DATCP Secretary Rod Nilsestuen appointed the Lead Arsenate Task Force (Task Force) in August 2006 to obtain advice on the approach state agencies, local governments, and private developers should use to respond to lead and arsenic soil contamination that resulted from lead arsenate use at orchards in Wisconsin (Appendix A).

The Task Force met six times between September 2006 and January 2008 in order to discuss and recommend ways the department should address lead and arsenic contamination at historic orchard sites (Appendix B). The Task Force was a catalyst for the three state agencies to discuss and agree on a regulatory framework that is practical, economical and protective of public health. Task Force members encourage the agencies to continue to use this cooperative approach on issues where multiple agencies have responsibilities. The Task Force recommendations are below; a more complete discussion of the findings and recommendations is in the Findings and Recommendations section of the Task Force report.

## **Regulatory Framework Recommendations**

The Task Force discussed the health risks associated with lead and arsenic soil contamination and found that overall, soils in historic orchards contaminated by lead and arsenic are a low health risk for Wisconsin residents, but that lead arsenate mixing and loading sites are a higher health risk and of greater concern.

After its third meeting, the Task Force recommended the department:

1. Review existing literature and determine how other states are handling lead and arsenic soil contamination from pesticide use [Completed].
2. Establish a level across state agencies at which arsenic and lead (from lead arsenate pesticides) become a health concern so that people know and can make good decisions and take appropriate actions [Completed. *The agencies recommended property owners report arsenic sample results above background concentrations or lead sample results above 50 parts per million (ppm) and that DATCP order more thorough site investigations for sites with arsenic sample results exceeding 100 ppm or lead sample results exceeding 400 ppm.*]
3. Review existing NR 700, Wis. Admin. Code, regulations for their flexibility and establish procedures for all state agencies to follow so there is a common approach that is efficient, effective and economically feasible [Completed].

At the Task Force's fourth meeting, the state agencies proposed a consensus regulatory approach based on flexibility within the existing NR 700 series (*See NR 700 Regulatory*

*Approach for Lead Arsenate Sites and Appendix C).* After that discussion and a follow-up discussion at its fifth meeting, the Task Force made the following additional recommendations.

4. DATCP, DNR, and DHFS should commit to the proposed NR 700 approach as presented at the November 19, 2007 meeting in a Memorandum of Understanding.
5. If, after completion of the arsenic background study, there is regional variation in the background number, the department should consider adopting a single, statewide background number for the purposes of implementing this program. A single statewide number would remain protective of public health and simplify outreach efforts.
6. When the department orders an investigation and cleanup, the property owner should continue to be eligible for ACCP funds.
7. The department should consider establishing a hardship process based on ability-to-pay for property owners who cannot afford the ACCP deductible or cost-sharing. The department should consider a variety of options as part of this assessment, including different cost-share rates and insurance.
8. In order to facilitate the disposal of contaminated soil, the department should develop a level at which the toxicity characteristic leaching procedure (TCLP) is not required for arsenic-contaminated soil. The department should develop this level as additional TCLP data become available, and it should be based upon these test results.

### **Information and Education Recommendations**

The Task Force believes that information and education is the key to a successful program related to sites with potential lead and arsenic soil contamination. The Task Force recommends that the department establish an education and awareness-building campaign designed to provide individuals, organizations, and communities with information needed to make knowledgeable and responsible choices about lead and arsenic contamination.

The Task Force recommends the department:

1. Deliver clear, consistent and balanced outreach messages. The department materials should encourage knowledge and prompt responsible action without provoking unnecessary fear. Information and education materials should include information about all sources of arsenic and lead.
2. Develop and disseminate informational materials about lead arsenate for a variety of audiences. The department should work with its stakeholders on key messages and how best to frame and deliver those messages. The Task Force recommends that the department work through stakeholder organizations and associations when possible to develop, review and disseminate information and education materials.
3. Prioritize information and education efforts based on health risks and maximum impact. To this end, the Task Force recommends that people and organizations that work with children be the department's top outreach priority.
4. Encourage DNR to continue to conduct outreach on the purpose of the Bureau for Remediation and Redevelopment's Tracking System (BRRTS) and the Geographic Information System (GIS) Registry and how to use these systems.
5. Develop four specific information and education pieces, including Frequently Asked Questions, Health Risks, Sampling, and Worker Protection (Appendix E).
6. Provide all outreach materials on the department's website and in hardcopy at a variety of locations in each county. In addition, the department should encourage links to its website by partner agencies and organizations.

### **Disclosure Recommendations**

The Task Force reviewed existing and potential real estate disclosure requirements for properties that were formerly orchards and that have soil that is or may be contaminated by lead and arsenic. Existing requirements would require property owners to disclose known lead and arsenic contamination. The Task Force:

1. Believes the existing disclosure requirements are adequate; and
2. Encourages realtors to use the optional lead/arsenic pesticide addendum when applicable (Appendix F).

### **Orchard Identification and Database Recommendations**

The accurate identification and location of orchards where lead arsenate pesticides were mixed, loaded and applied is critical to reducing the risks these pesticides present to human health. The Task Force reviewed the orchard spatial database--containing both former and current orchards--compiled by DATCP. The Task Force concluded that, although the database provides valuable information that locates many of the orchards of concern, further development and verification of the database is required in order to achieve the goal of demarcating all of the orchards. The Task Force found that the DATCP database is the only readily accessible source of statewide information for landowners and other interested parties who wish to locate the orchards of concern. In addition, the Task Force determined property owners have a right to know if the database identifies their property prior to making it public.

The Task Force recommends the department:

1. Take steps to further identify and verify the location of past orchards. Initial steps DATCP could take include: 1) carrying out a survey of all available sources of information that may contribute to the demarcation of former orchards, 2) securing funding or other means to research these sources of information, and 3) prioritizing the data compilation and validation by county.
2. Design and construct a web based geographic information system that demarcates the orchards of concern. The project would include the conversion of the existing photo based database to a digital GIS database and the incorporation of reliable locational information from other sources.
3. Include appropriate disclaimers on the database when it is released (See Appendix G).
4. Notify affected property owners of the database, explain how the database may be used, and provide them an opportunity to have their property removed, either before or after publication, if the site is not contaminated to a level that presents a public health risk, or can be shown not to have been the site of a former orchard. This notification should take place prior to making the database public. The department should consider releasing the database information county by county, as it is able to complete and validate the data. This approach could simplify the notification of property owners.
5. Establish a work group to provide specific recommendations on the design and use of the orchard database.
6. Allow others involved in the Wisconsin Land Information System program to link to the database, when it is available.

# Background

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Historic pesticides, including lead and arsenic compounds, can linger in soil and present a health risk to Wisconsin residents. Old orchard sites are of particular concern due to the heavy applications of pesticides and the undisturbed soil. In Wisconsin, approximately 50,000 acres out of approximately 10,000,000 cropland acres were in orchard use at the height of lead arsenate pesticide (lead arsenate) use in the mid-1900's. Some orchards from this era remain in orchard use today, some are already developed, and development pressure is increasing for many of the undeveloped sites.

Over the last several years, the departments of Agriculture, Trade and Consumer Protection (DATCP or department), Health and Family Services (DHFS), and Natural Resources (DNR) have been working to find an approach for managing the contaminated soil at old orchards that will simultaneously protect human health and the environment, promote the collection and sharing of data, and allow for economical solutions at contaminated sites. DATCP created a task force under s. 227.13, Wis. Stats. to obtain advice on the approach the state, local governments, and private developers should use to respond to lead and arsenic soil contamination that results from historic pesticide use at orchards in Wisconsin.

## Creation of the Task Force

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DATCP Secretary Rod Nilsestuen appointed the Lead Arsenate Task Force (Task Force) in August 2006 (See Appendix A). Secretary Nilsestuen selected ATCP Board member Mike Krutza to chair the Task Force and sixteen other members to represent key stakeholders. Staff from DATCP, DNR and DHFS provided technical support to the Task Force. The Task Force met six times on September 25, 2006, November 28, 2006, January 24, 2007, November 19, 2007, December 17, 2007 and January 15, 2008. Meeting minutes are in Appendix B.

The Secretary charged the Task Force with assisting the department in developing strategies that are protective of human health, economical and practical to address soil contamination from the use of lead arsenate in orchards. Specifically, the Secretary asked the Task Force to identify:

- A practical and economical approach the department should use to limit human exposure to contamination from lead arsenate use.
- Implementation challenges related to this approach and recommendations for how to overcome those challenges.
- Outreach and education messages and strategies.

As part of their deliberations, the Task Force provided recommendations on:

- How to encourage sampling at orchard sites.
- The reporting and clean-up levels for lead and arsenic.
- Investigative and remedial strategies for addressing the various type of sites.
- The disclosure requirements for property transactions.
- The best utilization of information systems.
- Outreach strategies that provide the public with information they need to make informed decisions.

The Task Force's findings and recommendations begin on page 11.

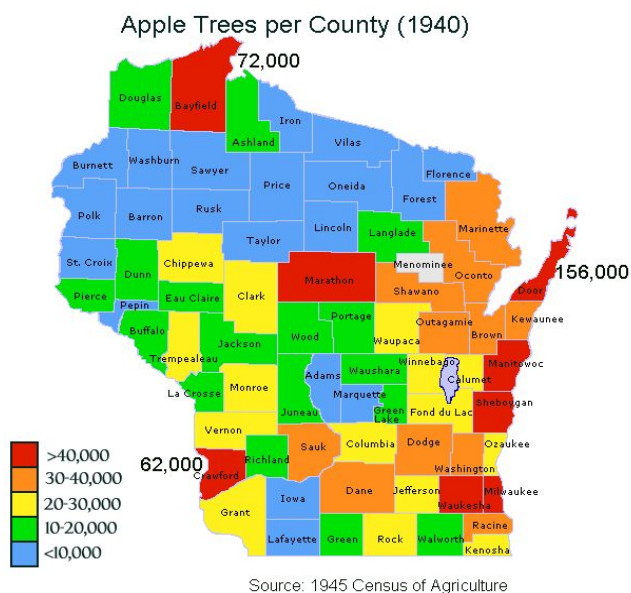
# Lead Arsenate Pesticides and Wisconsin Orchard Use

Lead and arsenic are naturally-occurring elements, and as a result, most soil throughout Wisconsin contains some level of each. The naturally-occurring concentration of lead and arsenic is known as *background*. In Wisconsin, the background concentration of arsenic is around 5 part per million (ppm), although this can vary regionally. The background concentration of lead also varies regionally. The DNR, DHFS and others are currently conducting a statewide background study to determine specific regional background levels of arsenic and 16 other elements.

In Wisconsin and other states, growers used lead arsenate from the late 1800's to the mid 1960's to control insects at orchards and on other crops. Lead arsenate was the preferred arsenic-containing insecticide because it was less toxic to plants and, since it was applied in foliar spray, the effects lasted longer than other insecticides (Peryea, 1998). Growers stopped using lead arsenate in the mid 1960's due to the availability of synthetic pesticides; the U.S. Environmental Protection Agency (EPA) banned lead arsenate pesticides in 1988. Because lead and arsenic do not break down and are not very mobile, they often are found in the top several inches of soil of old orchards at concentrations above background.

At prime lead arsenate use periods in the 1940s and 1950s, the department estimates there may have been as many as 50,000 acres of orchards in Wisconsin out of a total of 10,000,000 acres in cropland use in Wisconsin at that time. Between 1890 and 1935, National Agricultural Statistics Service data indicate Wisconsin had about 30,000 to 40,000 total acres in apples, of which about half were in commercial production. Cherry orchards covered about 5,000 acres in 1920 and doubled to 10,000 acres by 1950. In 1940, the largest apple producing counties were Bayfield, Chippewa, Crawford, Dane, Door, Jefferson, Kenosha, Manitowoc, Marathon, Marinette, Ozaukee, Richland, Racine, Sheboygan, and Trempealeau (see Figure 1). Door County was by far the largest producer of apples and cherries. Commercial apple orchards now cover about 6,000 acres and cherry orchards now cover about 2,000 acres in Wisconsin.

Figure 1:



While other agricultural settings also used lead arsenate, orchards are of particular concern because they received multiple applications each year and orchard soils are less disturbed than the soil in other agricultural fields. For example, there is no tilling of orchard soils and crops are not rotated. While orchards were most common in some areas of the state, this is a statewide issue because many counties have orchards where growers used lead arsenate.

Some old orchard sites have remained orchards, while others – such as those in Door County -- are under intense development pressure. The economic value of the former orchard properties also varies considerably.

## **Identification and Notification of Potentially Contaminated Sites**

Informing existing and potential property owners about possible lead and arsenic contamination is difficult because the department is unsure about the location of all historic orchard sites. Using an EPA discretionary grant, staff attempted in 2003 to locate and map old orchards using aerial photographs from the 1930s and 40s. Department staff then created a photograph-based database of the sites identified as orchards. When those data points are overlaid with current Geographic Information System (GIS) layers, the department found that approximately ¼ of the orchards identified from that time period have already been developed into residential, institutional, commercial and industrial uses. Outside of the department's database, other sources of information available to homeowners that indicate the probable location of historic orchards include a number of state and local map resources.

Although the department has compiled this database, it is not available on the DATCP website due to concerns about the accuracy and completeness of the data. Because the data has not been validated, the department has not notified persons whose property is identified in the database as a possible old orchard.

One way to confirm the location of historic orchard sites where lead arsenate was used is through soil samples. Soil sample results from lead and arsenic contaminated sites generally have lead concentrations present in roughly a 4:1 ratio to arsenic concentrations. Many soil samples are taken as part of a real estate transaction or during development of a property. The department has worked with historic orchard sites under a variety of circumstances, including pre-development, sites that are partially-developed and those fully-developed as residential properties. Each type of site has unique difficulties. Currently, orchard sites are not eligible for cost sharing, to investigate or remediate, through the department's Agricultural Chemical Cleanup Program (ACCP) unless the department orders a clean-up. In some cases, a comprehensive investigation and cleanup would exceed the ability of the property owners to pay.

### **Similar issues in other states**

Many states are dealing with residual contamination from the past use of lead arsenate. The department gathered information from 27 states about how they handle lead and arsenic residues; 18 of those states reported lead and arsenic soil contamination as an issue, but only five states are further along than Wisconsin in determining how to address the sites. Each state handles the issue slightly differently, but all encourage extensive outreach and education to affected parties. Clean up goals vary among states, as do disclosure requirements and legal responsibilities.

The New Jersey Department of Environmental Protection (NJDEP) formed the Historic Pesticide Contamination Task Force in 1997 in response to a developer finding elevated levels of pesticides at a former orchard site. In 1999, the task force completed a final report, which NJDEP adopted as a guidance document. More information and a copy of the guidance document are available on-line at <http://www.state.nj.us/dep/special/hpctf/>.

Washington State identified area-wide lead and arsenic contamination from both old orchards and metal smelting operations. Washington's Departments of Ecology, Agriculture, Health, and Community Trade and Economic Development formed a task force and produced a guidance titled "Area-wide Soil Contamination Strategy: Implementation of Task Force Recommendations". This document is available on-line at [http://www.ecy.wa.gov/programs/tcp/area\\_wide/area\\_wide\\_hp.html](http://www.ecy.wa.gov/programs/tcp/area_wide/area_wide_hp.html).

In North Carolina, the Barber Orchard site became a federal Superfund site as a result of historic contamination. The EPA removed 31,500 tons of soil from 28 residences as part of the

cleanup. The site had leaking underground pesticide distribution lines and groundwater contamination.

Hawaii published guidance in August 2006 on how to handle arsenic contaminated soils from sodium arsenate pesticide applications. Oregon also developed guidance for handling agricultural lands contaminated by pesticides which is available at:

<http://www.deq.state.or.us/lq/pubs/docs/cu/GuidanceEvalResidualPesticides.pdf>

Several other states contacted Wisconsin during the Task Force's deliberations to inquire about how the state plans to address contamination from lead arsenate use.

# Human Health Risks

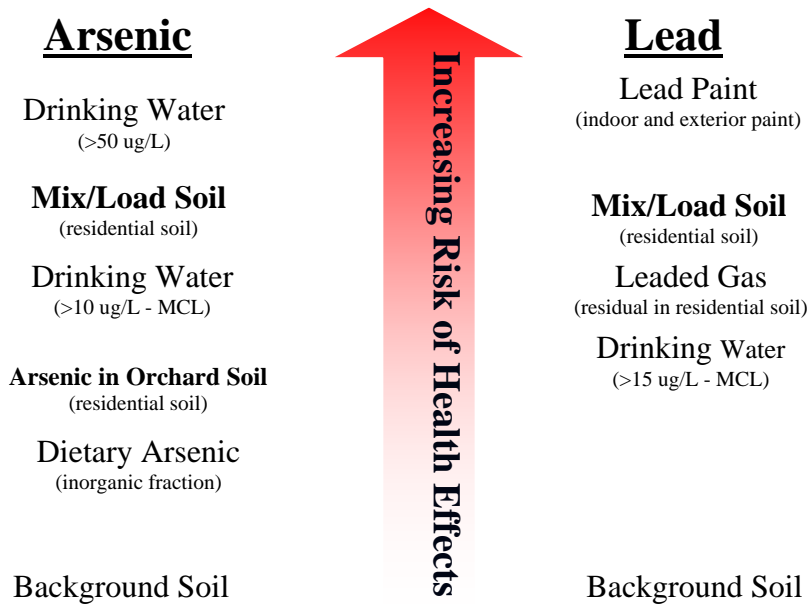
The potential for adverse human health effects from lead arsenate exists when there is a completed pathway from the original source of the pesticide to an exposure to the human body. In this case, the original source is the past application of lead arsenate to orchard trees to control insects. A portion of the past applications were either applied directly to the soil, or washed off the foliage and transferred to the orchard soil. While the arsenic in the originally-applied lead arsenate may change oxidation states (for example arsenate or As(V) to arsenite or As(III)) lead and arsenic do not break down into non-toxic products nor are they very mobile in soils. Since both forms of the inorganic arsenic have relatively similar effects, the differences are not considered here. The majority of lead and arsenic buildup from pesticide applications is expected to remain at or near the surface in soil.

The exposure concern for both lead and arsenic is direct human contact with the soils through incidental inhalation and ingestion. The relative risk of an exposure depends on the frequency and duration of the exposure. Thus, the potential human health risk also depends on the current land use of the soils containing lead arsenate residues. For orchards converted to residential uses, this exposure occurs while working in gardens, playing in native soils, breathing air containing dust from exposed soils in work areas or roadways, and other related activities. Studies have been done on how much soil is inadvertently consumed each day. Children--who tend to have the greatest level of exposures to soil and can be among the most sensitive individuals to contaminants--are conservatively assumed by the EPA to consume 200 mg of soil per day (equivalent to the amount found under a fingernail or a pinch of salt).

There have been no health studies of Wisconsin residents exposed to lead arsenate contaminated soils. A review of the toxicology literature for both lead and arsenic and relevant mixtures did not identify studies of combined effects of lead and arsenic from lead arsenate pesticides.

Risks from chemical exposures are a function of the level of exposure (amount of chemical) as well as the frequency and duration of exposure. Figure 2 provides a graphic presentation of the relative public health implications of common environmental sources of arsenic and lead exposure. This graphic generalizes the relative risks and there is great diversity of actual exposure among individuals that could change their specific relative risks.

Figure 2: Relative Risks



### ***Health Implications of Arsenic***

The health effects most relevant to arsenic exposure include an increased risk of a variety of cancers (e.g. cancers of the skin, bladder, liver, kidney, and prostate). The evidence from animal studies and human epidemiological studies of the carcinogenicity for arsenic is strong. As a result, EPA, the International Agency for Research on Cancer, and the World Health Organization list arsenic as a known human carcinogen. The main source of human exposure to arsenic is through ingestion of contaminated water or food. For exposure to arsenic in soil, ingestion and inhalation are the primary concerns. Compared to exposure from contaminated drinking water, the increased cancer risk from exposure to arsenic from orchard soils is low.

The best epidemiological studies of people exposed to arsenic come from people incidentally consuming arsenic in their drinking water. These studies in drinking water have found that non-cancer health effects such as cardiovascular disease are associated with exposure to arsenic at concentrations found in our environment. Arsenic ingestion at the highest levels of environmental exposure may cause stomach and intestinal irritation, anemia, a "pins and needles" sensation in hands and feet, and a number of skin problems that can lead to skin cancer when exposure is continuous over long periods. (NAS, 1999) (ATSDR, 2007)

Based on our knowledge of lead arsenate, its use history in Wisconsin and the data available, DHFS does not expect arsenic levels less than five parts per million (ppm) to increase the public health risk, because the naturally occurring background concentrations are regularly within that range. When property owners develop a former orchard that has residual lead and arsenic in the soil into residential use, a long-term exposure is expected. These long-term exposures to soils with arsenic concentrations of five to 100 ppm arsenic represent a low increased cancer risk that can and should be managed to protect public health. Easy protective measures for a property owner might include keeping a grass cover over contaminated soils (especially where children play) and using a raised bed with clean soil for gardening. Concentrations greater than 100 ppm often indicate an old pesticide mixing and loading site and are of more concern for possible acute health concerns. These levels, if ingested for weeks or months, may cause adverse health affects. Sites with arsenic concentrations greater than 100 ppm require different responses, including potentially removing the contaminated soil from the site and landfilling it.

### ***Health Implications of Lead***

The primary routes of exposure for lead in soils are ingestion of lead contaminated soils and inhalation of dust derived from lead contaminated soils. Health officials do not consider skin absorption a significant exposure route. However, direct contact with hands can increase the ingestion of lead by small children due to their higher degree of hand-to-mouth activity.

Exposure to lead causes a number of negative health effects, most notably slower physical and mental development for infants and young children. Developing fetuses, infants and young children have a higher sensitivity than the general population to lead. Other effects from exposure to high concentrations of lead in soil for both children and adults include increased reaction time, memory disturbances, increased blood pressure, reproductive problems, and damage to the nervous system and kidneys. Lead levels in typical orchard soils are elevated above background, but are usually not high enough to pose a significant risk to children. The more concentrated lead levels from a pesticide mixing and loading site can pose a significant risk and should be managed carefully.

# Wisconsin's Comprehensive Cleanup Code – NR 700

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The DATCP and DNR regulate environmental cleanups under a group of rules collectively referred to as the NR 700 series. As Wisconsin's comprehensive environmental cleanup code, the NR 700 series establishes cleanup standards and provides information related to legal and technical issues for responsible parties, guidance to consulting firms, and consistent review by agency staff. The NR 700 series includes guidance related to notification requirements, general standards, soil cleanup standards, management of excavated contaminated wastes and case closure.

## **Historical concerns with handling lead and arsenic contamination sites under NR 700**

Orchard soils contaminated with lead and arsenic present more difficulties than the typical contaminated sites DNR or DATCP oversee. Lead and arsenic soil contamination stems from legal use of a legal pesticide and covers large areas of land rather than being concentrated in small locations. In addition, many of the contaminated orchard sites are developed or partially developed. Finally, the current property owners typically were not responsible for the past pesticide use and resulting soil contamination. DATCP, DNR, and DHFS staff have struggled with how to best address lead arsenate sites using the NR 700 approach. Issues included:

- **Arsenic contamination levels:** The NR 720 Table 2 residual contaminant level (RCL) of 0.039 ppm for arsenic for non-industrial sites is lower than most background levels. The industrial NR 720 Table 2 RCL value for arsenic is 1.6 ppm. These levels are based on a one in one million increased cancer risk. Since NR 700 allows cleanup to background levels when background is higher than the table value (Background arsenic levels of 5 ppm would be a 1 in 10,000 to 1 in 100,000 increased cancer risk), each individual site had to determine its site-specific background level prior to commencing a cleanup or determining acceptable land use controls. This process could be both time-consuming and expensive.
- **Reporting:** The agencies could not agree on the appropriate reporting levels for sites showing elevated lead and arsenic concentrations.
- **Definition of a site:** DATCP was concerned the NR 700 requirement to determine the "extent of contamination" would discourage residential property owners from sampling because it could require sampling of their neighbor's property, which would add cost and potentially unwillingly engage their neighbors in a clean-up. If property owners chose not to sample or not to report to avoid involving their neighbors, this would not be protective of public health.
- **Site investigation and closure:** DATCP believed the NR 700 requirement to hire a 3<sup>rd</sup> party consultant to conduct an investigation would substantially increase the cost and complexity of the investigation and closure process and discourage property owners from taking samples and reporting their sample results.
- **Mix and Load sites:** DATCP, DNR and DHFS were concerned that the potential disincentives to sample (e.g. cost, entry into regulatory process) might discourage property owners from sampling and prevent finding the mix and load sites which are the greatest health risk.
- **Hazardous waste testing:** DATCP felt that requiring toxicity characteristic leaching procedure (TCLP) testing for all lead and arsenic contaminated soils was an unnecessary expense and sends confusing messages to property owners. DNR has regulatory flexibility about when to require TCLP testing, but landfill operators have discretion to require the testing prior to accepting the wastes.

# **Task Force Deliberations**

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The departments provided the Task Force with extensive information about the history of lead arsenate use in orchards, the health risks related to arsenic and lead, the cleanup process, and the issues of concern during the Task Force's first three meetings. After these presentations and related Task Force discussions, the Task Force identified three primary issues to resolve related to the remediation of contaminated soil from the historical use of lead arsenate: improving interagency cooperation, enhancing and validating the orchard database, and providing extensive outreach to property owners and other key stakeholders.

## **Interagency cooperation**

The Task Force directed DATCP, DNR, and DHFS to improve inter-agency cooperation related to lead arsenate cleanup policy and develop a single statewide approach to the issue. At their January 2007 meeting, the Task Force instructed the agencies to recommend to the Task Force lead and arsenic levels at which property owners need to take measures to protect public health. The Task Force also directed the agencies to recommend a sampling, reporting, site investigation and closure process for lead arsenate sites that would be protective of public health, technically feasible, and cost-effective. The Task Force requested that the agencies develop this information prior to reconvening the Task Force.

## **Orchard Identification and Database**

The Task Force expressed concerns about the photograph-based orchard database and the potential financial impact on property owners and growers if the department required additional disclosure based on an incomplete or unverified database or publicized bad or incomplete information. While the Task Force agreed that informing current and future property owners about the location of former orchards is important, members felt more accurate information is needed prior to communicating to property owners and buyers about potential site risks.

## **Information and Education**

The Task Force determined that information and education is crucial to a successful program related to lead and arsenic soil contamination. The Task Force agreed that property owners need good information in order to determine their risk and their risk tolerance and to take appropriate protective measures. The Task Force expressed concerns that the agencies not overstate the health risks of lead and arsenic soil contamination compared to other potential risks. They instructed the agencies to develop an information and education approach that prioritizes audiences, engages key stakeholders, provides a balanced message, and includes information about all sources of lead and arsenic.

# NR 700 Regulatory Approach for Lead Arsenate Use Sites

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At the direction of the Task Force, staff from DATCP, DNR, and DHFS met three times between January and September 2007 to discuss interpretations and concerns related to the NR 700 regulations and to develop arsenic and lead action levels. The three agencies reached consensus on arsenic and lead action levels and agreed that there is adequate regulatory flexibility within existing NR 700 regulations to handle the wide variety of lead and arsenic contaminated sites in a manner that is practical, economical and protective of public health. They presented their findings, explained below, to the Task Force at its fifth meeting.

## **Arsenic and Lead Action Levels**

The departments proposed that a reported sample result become a case for arsenic when concentrations exceed background. Arsenic background concentrations in Wisconsin vary, but may be around 5 ppm. The DNR and DHFS currently are conducting a statewide arsenic background sampling project to determine regionally-specific arsenic background concentrations. A reported sample result would become a case for lead at 50 ppm, which is the value currently listed in NR 700.

As part of their mutual understanding related to lead arsenate cases, the agencies recommended that property owners with sites with arsenic concentrations greater than background but less than 100 ppm (when present with lead levels below 400 ppm) not be required to hire a consultant if they conduct an adequate investigation. They also agreed that the department:

- need not require property owners to determine the extent of contamination onto neighboring properties within a typical orchard
- usually will not require property owners to conduct groundwater investigations if groundwater is not at risk, and
- will not require property owners to “clean close” the sites.

Instead, the agencies agreed that DATCP may close sites with a land use control--using a performance standard such as a grass cover--and list it on the DNR's GIS Registry of contaminated sites. Property owners would be required to disclose the contamination and the land use control during property transactions. Clean closure--which requires sites to landfill or otherwise properly manage and remove all contaminated soil from the property—remains an option for property owners and developers that desire it. Clean closure is more expensive; however, sites that meet the clean closure requirements are not required to disclose during property transactions and will not be listed on DNR's GIS Registry.

DATCP may order a more thorough investigation and possible cleanup when arsenic levels exceed 100 ppm or lead levels exceed 400 ppm. Arsenic levels above 100 ppm (with lead levels around 400 ppm and present in approximately a 4:1 lead to arsenic ratio<sup>1</sup>) are indicative of possible lead arsenate mix and load sites, which pose greater health risks. Property owners ordered to investigate and cleanup their sites would be eligible for ACCP funds. DATCP would likely require lead arsenate sites over 100 ppm arsenic and over 400 ppm lead to clean up their sites to levels below 100 ppm arsenic and below 400 ppm lead.

Task Force members expressed support for the approach as described by the agencies and outlined in several sample scenarios (Appendix C), but identified some remaining concerns with the proposed approach and the orchard database. These included concerns that:

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<sup>1</sup> If arsenic is over 100 ppm and lead is not present in a 4(Pb):1(As) ratio, or if lead is over 400 ppm and arsenic is not present in the 4:1 ratio, it may not be a DATCP lead arsenate case. DNR could still order a site investigation and cleanup due to the elevated levels of non-pesticide sources of lead and arsenic.

- property owners will not sample correctly;
- the department is focusing on orchard properties only, instead of all properties where lead arsenate was used;
- this regulatory approach will create disincentives to sample;
- local governments will be the controlling regulatory authority, not the state agencies;
- it is not protective of public health not to have notification requirements to neighboring properties within an old orchard;
- the database identified some properties that may not have been orchards and may not be contaminated; and
- cleanups in some areas of the state might exceed the value of the land and the ability of people to pay.

At the December 17, 2007 meeting DATCP staff provided responses to those concerns (Appendix D), including a commitment to improve and validate the database to the extent practical, to develop and disseminate information and education materials that explain how to collect a proper sample, and to promote the flexibility in NR 700 to encourage property owners to sample. The Task Force extensively discussed sites where the department orders an investigation and cleanup and the property owners have a limited ability to pay, and addressed this situation in their recommendations.

# Findings and Recommendations

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The Task Force provided recommendations to the department in four categories: regulatory framework, information and education, disclosure, and orchard identification and database.

## Regulatory Framework

The Task Force discussed the health risks associated with lead and arsenic soil contamination and found that:

- Overall, soils in orchards contaminated by lead and arsenic are a low health risk for Wisconsin residents. However, lead arsenate mixing and loading sites are a higher health risk and of greater concern.
- It is reasonable to deviate from the existing regulatory health-based standard (0.039 ppm for non-industrial sites) for arsenic given that naturally occurring arsenic (background) is thought to be significantly higher (~ five ppm) than the existing standard.
- The way the departments have applied the current regulations to lead and arsenic contaminated sites is effective in some instances and too cumbersome and costly in other cases.

Based on these findings, the Task Force recommends the department:

1. Review existing literature and determine how other states are handling lead and arsenic soil contamination from historical pesticide use. [Completed. *See Page 3 of report for more detail*]
2. Establish a level across state agencies at which arsenic and lead (from lead arsenate pesticides) become a health concern so that people can make good decisions and take appropriate actions. [Completed. *The agencies recommended property owners report arsenic samples results above background concentrations and that DATCP order more thorough site investigations for sites with arsenic concentrations exceeding 100 ppm or lead concentrations exceeding 400 ppm.*]
3. Review existing NR 700 regulations for their flexibility and establish procedures for all state agencies to follow so there is a common approach that is efficient, effective and economically feasible. [Completed]

DATCP, DNR, and DHFS implemented these recommendations between January 2007 and November 2007 at the request of the Task Force. At the Task Force's November 19, 2007 meeting, the state agencies proposed a consensus regulatory approach based on flexibility within the existing NR 700 series (See NR 700 Regulatory Approach for Lead Arsenate Sites and Appendix C).

As a result of that discussion and a follow-up discussion at its December 17, 2007 meeting, the Task Force made the following additional recommendations.

4. DATCP, DNR, and DHFS should commit to the proposed NR 700 approach as presented at the November 19, 2007 meeting in a Memorandum of Understanding.
5. If, after completion of the arsenic background study, there is regional variation in the background number, the agencies should consider adopting a single, statewide background number for the purposes of implementing this program. A single statewide number would remain protective of public health and simplify outreach efforts.

6. When the department orders an investigation and cleanup, the property owner should continue to be eligible for ACCP funds.
7. The department should consider establishing a hardship process based on ability-to-pay for property owners who cannot afford the ACCP deductible or cost-sharing. The department should consider a variety of options during the assessment, including different cost-share rates and insurance.
8. In order to facilitate the disposal of contaminated soil, the department should develop a level at which TCLP testing is not required for arsenic-contaminated soil. This level should be developed as additional TCLP data become available and be based upon these test results. *(Note: Historically, DNR's hazardous waste program has based the decision to run the TCLP test on any sample where the total concentration is 100 times the regulatory level in Table 2 of NR 661.24. A department policy recommendation does not preclude landfills from requiring TCLP testing).*

The Task Force also noted that the consensus regulatory approach and these recommendations should not prevent owners or developers from implementing more stringent cleanups than required to reduce further the potential risk and hazards from impacted sites.

### **Information and Education**

The Task Force believes that information and education are the keys to a successful program to address lead and arsenic contaminated soils. The Task Force recommends that the department work with partners to establish an education and awareness-building campaign designed to provide individuals, organizations, and communities with information needed to make knowledgeable and responsible choices about lead and arsenic soil contamination.

The Task Force recommends the department:

1. Ensure all outreach messages are clear, consistent and balanced. The department materials should encourage knowledge and responsible action but not provoke unnecessary fear. Information and education materials should include information about all sources of arsenic and lead.
2. Develop and disseminate informational materials about lead arsenate and lead and arsenic soil contamination to a variety of audiences. The department should work with its stakeholders on key messages and how best to frame and deliver those messages. The Task Force recommends that the department work through stakeholder organizations and associations when possible to develop, review and disseminate information and education materials.
3. Prioritize information and education efforts based on health risks and to achieve maximum impact. To this end, the Task Force recommends that people and organizations that work with children (e.g. daycare owners, camps, municipal governments, and public and private schools) be the department's top outreach priority.
4. Encourage DNR to continue to conduct outreach on the purpose of BRRTS and the GIS Registry and how to use these systems.
5. Develop four specific information and education pieces, including Frequently Asked Questions, Health Risks, Sampling, and Worker Protection (See Appendix E).
6. Post all outreach materials on the department's website and in hardcopy at a variety of locations in each county. In addition, the department should encourage links to its website by partner agencies and organizations.

## **Disclosure**

The Task Force reviewed existing and potential real estate disclosure requirements for properties that were formerly orchards and that have soil that is or may be contaminated by lead and arsenic. Existing requirements require sellers to disclose known lead or arsenic soil contamination as a defect during real estate transactions. The Task Force discussed whether sellers who live on property that might have been an orchard and might be contaminated should be required to disclose during property transactions. The Task Force:

1. Believes that the existing disclosure requirements are adequate; and
2. Encourages realtors to use the optional lead/arsenic pesticide addendum when applicable (See Appendix F).

## **Orchard Identification and Database**

The accurate identification and location of orchards where growers mixed, loaded and applied lead arsenate is critical to reducing the risks these pesticides present to human health. The Task Force reviewed the orchard spatial database compiled by DATCP. Department staff developed the database from an examination of some of the available United States Department of Agriculture (USDA) aerial photographs. The Task Force concluded that, although the database provides valuable information that locates many of the orchards of concern, further development and verification of the database is required in order to achieve the goal of demarcating all of the orchards. The Task Force found that the DATCP database is one readily accessible source of statewide information for landowners and other interested parties who wish to locate the orchards of concern. Additional sources of information about former orchards include a variety of state and local maps. The Task Force determined that the department should inform property owners – prior to making the database public-- if the database identifies their property.

The Task Force recommends the department:

1. Take steps to further identify and verify the location of orchards and former. Initial steps DATCP could take include: 1) carrying out a survey of all available sources of information that may contribute to the demarcation of orchards, 2) securing funding or other means to research these sources of information, and 3) prioritizing the data compilation and validation by county.
2. Design and construct a web-based geographic information system that demarcates the orchards of concern. The project would include the conversion of the existing photo based database to a digital GIS database and the incorporation of reliable locational information from other sources (DATCP supported the University of Wisconsin's recently awarded grant to digitize the USDA aerial photographs of Wisconsin from 1937 to 1941.)
3. Include appropriate disclaimers on the database when it is released (See Appendix G).
4. Notify affected property owners of the database, explain how the database may be used, and provide them an opportunity to have their property removed, either before or after publication, if the site is not contaminated to a level that presents a public health risk, or can be shown not to have been the site of an orchard. This notification should take place prior to making the database public. The department should consider releasing the database information county by county, as it is able to complete and validate the data. This approach could simplify the notification of property owners.
5. Establish a work group to provide specific recommendations on the design and use of the orchard database.
6. Allow others involved in the Wisconsin Land Information System program to link to the database, when it is available.

# **Appendix A: DATCP Historic Lead Arsenate Pesticide Contamination Task Force Proposal**

## **Background**

Historic pesticides, including lead and arsenic compounds, can linger in soil at former agricultural properties and present a health risk to Wisconsin residents. Over the last 5 years, the Departments of Health and Family Services (DHFS), Agriculture Trade and Consumer Protection (DATCP), and Natural Resources (DNR) worked to create a guidance document for addressing historic lead and arsenic pesticides at old orchard sites, which are suspected of containing the worst historic pesticide contamination. However, it has been difficult to find an effective approach that will simultaneously protect human health and the environment, promote the collection and sharing of data, and allow for economical solutions at contaminated sites. Due to the large scope of the historic lead arsenate pesticide contamination problems (50,000 acres are believed to have been orchards when lead arsenate was used), DATCP staff proposed creating a task force under s. 227.13, Stats., for the purpose of obtaining advice related to contemplated rulemaking and about the approach the state, local governments, and private developers should use to respond to lead and arsenate soil contamination that results from historic pesticide use at orchards in Wisconsin.

## **Scope of Work**

The task force will assist the department in developing protective, economical and practical strategies to address soil contamination from the historic use of lead arsenate pesticides in orchards. The main issues we anticipate the task force addressing include:

- Identification of technically and economically viable alternatives and strategies to limit human and environmental exposure to contamination from historic lead arsenate pesticide use.
- Identification of any implementation challenges of these alternatives including cultural, institutional and legal challenges, and recommendations regarding how to overcome those challenges.
- Identification of the outreach and education approach the department should use to explain the risks posed by historic use of lead arsenate pesticides.

## **Logistics**

This task force will be appointed by and report to the Secretary of the Department of Agriculture, Trade and Consumer Protection.

The task force will be chaired by Michael Krutza of the ATCP Board. DATCP, DNR and DHFS have appointed representatives to provide technical support for the task force. The task force also may solicit information from affected parties and interested citizens in order to establish the scope and nature of the problem and to propose resolutions that are protective of human health and the environment, and are economically viable.

The task force will begin meeting on September 25, 2006, and will submit its findings to the Secretary in March 2007. The Secretary will report the findings to the Agriculture, Trade and Consumer Protection Board in May 2007.

## **Members**

<b>Organization</b>	<b>Representative</b>
1. Task Force Chair and ATCP Board Member	Michael Krutza
2. Community Bankers of Wisconsin	Rick Busch
3. Wisconsin Realtors Association	Tom Larson
4. Wisconsin Farm Bureau	Jeff Lyons
5. University of Wisconsin - Extension	Robin Shepard (Did not attend)
6. Medical College of Wisconsin	Dr. William Greaves
7. Wisconsin Builders Association	John Kisiel (Resigned after January 2007)
8. Wisconsin Towns Association	Rick Stadelman
9. Wisconsin Counties Association	Matthew Stohr
10. Environmental Representative	Bob Selk
11. ATCP Board Member	Cindy Brown
12. Wisconsin Apple Growers	Anna Maenner
13. Land Trust/ Brownfield Study Group	Art Harrington
14. Property Owner	Nobert Theine
15. Wisconsin Federation of Cooperatives	Tim Clay
16. Kewaunee County LCD	Andy Wallander (Resigned December 2006)
17. Outagamie County Health Dept.	Jeff Phillips

## **Technical Support Group**

DATCP will convene a technical group to support the task force, if the task force determines it needs one. Potential technical support group members include, but are not limited to:

- DNR
- DATCP
- DHFS
- Department of Regulation and Licensing
- WI Geologic & Natural History Service
- Natural Resources Conservation Service
- US EPA
- UW Agricultural Experimental Stations

## **Roles and Responsibilities**

DATCP will host the first meeting of the task force in Madison, WI and will provide staff support to the task force. Meetings are anticipated to be held monthly. Meetings will generally be held in Madison, WI, but alternate locations may be identified to allow the task force to visit former orchard locations. Alternate locations will be announced in advance of the meetings.  
DATCP Historic Lead Arsenate Pesticide Contamination Task Force

## **Task Force Purpose**

To provide findings and recommendations to DATCP Secretary Nilsestuen in developing protective, economical and practical strategies to address soil contamination from the historic use of lead arsenate pesticides in orchards. The Task Force should:

- 1) Identify a technically and economically viable strategy to limit human exposure to contamination from the historic use of lead arsenate pesticides.
- 2) Identify challenges to implementing the proposed strategy and propose alternatives to eliminate the challenges.
- 3) Identify the outreach and education approach we should use in explaining the risks posed by lead arsenate.

## **Desired Outcomes**

The Task Force should make recommendations on the following:

- How to encourage sampling at historic lead arsenate sites so property owners make informed decisions.
- When sampling should be required at historic lead arsenate sites.
- The reporting and clean-up levels for lead and arsenic.
- Investigative and remedial strategies for addressing these varying sites.
- The soil handling and disposal procedures for lead arsenate sites.
- The disclosure requirements for property transactions.
- The best utilization of information systems.
- Outreach strategies that provide the public with information they need to make informed decisions.

# Appendix B: Task Force Meeting Minutes

## DATCP Historic Lead Arsenic Pesticide Contamination Task Force

September 25, 2006  
MINUTES -- Approved

**Members Present:** Cindy Brown, Rick Busch, Tim Clay, William Greaves (by phone), Art Harrington, John Kisiel, Mike Krutza, Jeff Lyon, Anna Maenner, Jeff Phillips, Bob Selk, Robin Shepard, Rick Stadelman, Matt Stohr, Norbert Theine, and Andy Wallander.

**Staff and Others Present:** Jeff Ackerman (DATCP), Lori Bowman (DATCP), Mark Giesfeldt (DNR), Kris Gordon (DATCP), Rick Graham (DATCP), Jennifer Heaton-Amrhein (DATCP), Duane Klein (DATCP), Ed Lynch (DNR), Jessica Maloney (DHFS), Phil Morrow (Wisconsin Fertilizer and Chemical Association), Kathy Pielsticker (DATCP), Len Polczynski (DNR), Bruce Urben (DNR) and Chuck Warzecha (DHFS).

**Members Absent:** Tom Larson

Mike Krutza, Task Force Chair, called the meeting to order at 9:35 a.m.

Kathy Pielsticker, Administrator, DATCP Agricultural Resource Management Division, provided a welcome to the Task Force. She also thanked committee members for their time and willingness to help DATCP deal with this complex issue.

Chair Krutza provided a welcome and introduction. The purpose of the Task Force is to develop recommendations for Secretary Nilsestuen that are practical, economical and protective. He went through the purpose statement and the desired outcomes of the Task Force. Mr. Krutza also reviewed the Task Force ground rules.

Task Force members introduced themselves and their areas of expertise. Chair Krutza thanked members for their time on the Task Force.

Lori Bowman discussed the goals for this first meeting of the task force and explained the lead arsenate problem and key issues. The presentations today will mainly focus on orchards (cherry and apple) with 50,000 acres statewide. Lead arsenate becomes an issue when orchards are redeveloped. The Task Force will look at barriers they see going forward and how to mitigate the barriers.

### **Background and History**

Jeff Ackerman and Rick Graham gave a presentation on the background and history of lead arsenic use. The powerpoint presentations are available on the website. They stated that a high percentage of mixed load sites (at old orchards) have lead arsenate contamination, but that due to the small size of mixed load sites, it is only about two percent of the problem (according to the Door County study).

Art Harrington mentioned the EPA Due Diligence requirement to be exempt from Superfund requirements. He also asked if the GIS website will be accessible.

Duane Klein offered to print GIS maps of old orchard sites near any member's office or home who did not already receive one.

### **Public Health Implications—Exposure and Effects:**

Chuck Warzecha gave a presentation on the public health implications of orchard soils. The powerpoint presentation is available on the website. He stated that DHFS has more interest in sample results over 10 ppm.

Art Harrington stated that there is a challenge in dealing with three different agencies on lead arsenate contamination on old orchard sites, which needs to be addressed.

### **Current Regulatory Framework for Site Investigations & Remediation:**

Mark Giesfeldt and Bruce Urben gave a presentation on DNR's rule NR 700. The powerpoint presentation is available on the website. Giesfeldt stated that the NR 700 rules cover about 27,000 cases a year, and that DNR generally has no direct involvement until closure, when they certify completion.

Task force members had numerous questions regarding the statutory requirement for spill notification. Tim Clay and Art Harrington asked if contamination from legal application of a pesticide is a spill. Giesfeldt stated that DNR's position is that pesticide application is not a spill when it is an orchard, but it needs to be looked at when land use changes. He also stated that this is an area of agency disagreement.

Art Harrington asked questions about the reporting and notification requirements, and whether or not the exception to the exemption is only for human health impacts or if it is for environmental impacts as well. Giesfeldt stated that DNR's interpretation is for both health and environmental impacts, but that again, there is agency disagreement on this issue.

Duane Klein gave an overview of the Agricultural Chemical Cleanup Program (ACCP) which has two parts, cleanup and reimbursement. Cleanups follow the NR 700 process. His powerpoint presentation is available on the website.

Norbert Thiene and other Task Force members questioned why, in the case of a legal application, the property owner or applicator should be responsible to pay. He questioned who is the responsible party, and if the government or manufacturer should have to pay since they made the use possible. Mark Giesfeldt stated that the spill law is broad, and that whoever causes, discharges, or is the property owner can be liable.

Task Force members also asked about the health standard being 0.039 ppm, which is lower than Wisconsin's average background level of 5 ppm. Mark Giesfeldt said this is being resolved through the NR 720 rule revision process. Ed Lynch offered to provide updates on a study DNR is completing.

## **Real Estate Notification of Deficiencies**

Duane Klein shared a real estate disclosure form called “Lead/Arsenic Pesticide Addendum,” which can be part of an Offer to Purchase/Lease but is not mandatory. This form was developed in 2002 by the Wisconsin Realtors Association with input from DATCP.

Bob Selk stated that there needs to be diverse interests involved in design of the disclosure form, if there is going to be one. He asked if there are sampling standards, since there is a disclosure form out there. He also asked if these sampling standards (if any) are adequate.

Art Harrington asked if property owners have an ethical need to disclose (what?) during property transactions. He stated that under Wisconsin law it is fraud to not disclose a known defect, and wondered how we would know if a property was formerly an orchard, and if so, would that alone make it be “defective” or would there have to be sample results showing lead arsenate contamination above the background level. Other task force members questioned if the mere presence of an orchard made it an impediment to development and a potential liability.

Task Force members indicated that they would like a presentation on sources of information about the possible orchard sites, including the GIS Registry, BRRTS, and deed restrictions.

## **Task Force Reactions to Lead Arsenate Issues**

After completing the background presentations, Chair Krutza asked members to share their reactions to today’s presentations and the lead arsenate issues:

**Tim Clay**—There are gray areas between the agencies on how to address this issue. The agencies are trying to operate under existing rules and laws that may not be appropriate. How can we address this issue and move forward in a streamlined process? A big focus should be to get information and education to people who may be purchasing sites, followed by information and education to those who currently own sites. We shouldn’t make disclosure a big barrier. We need to figure out how to get the information and education out to the right people.

**Anna Maenner**—I have concern for my growers, the possible liability they may have, and concern about their not knowing that they have this potential liability. Lots of orchards change hands, and we need to figure out how this impacts sellers and buyers.

**Rick Busch**—Concerned about what this will do to the orchards financially. Disclosure will be handled due to concern from the buyers. Have to figure out who’s going to be the unhappiest if contamination is found. The key is education.

**Bob Selk**—There are lots of litigation problems that can be dealt with if we have more accurate information on where risks exist, particularly mixing sites. The web-based data set is a good first effort but needs more work with agricultural photos and other sources. The anxiety is from the unknown. Testing and sampling is not that difficult.

**Mark Giesfeldt**—Echo Bob’s concerns about information. We need to have information available to people. We would like this to fit into the bigger framework of all contaminated sites without becoming a special program.

**Matt Stohr**—There is room for improvement in the three agencies working together. We need more accurate information and more education. Would like an update on what are the current local government efforts, particularly counties and UW-Extension.

**Norbert Thiene**—I have fear. Lots of people add up to 50,000 acres. The state is doing a lousy job of putting out information on 50,000 acres of contaminated land. Need more accurate information. If serious about this, get more money appropriated to do testing. State of Wisconsin has 60,000 miles of highway with land next to it that is contaminated with lead—what are we doing about that?

**Andy Wallander**—There is a need for education. From the property buyer's perspective, we need a simple package of information that can be handed out. We won't have to require a disclosure form because buyers will demand it if they are educated. Need to take the nature of sites into account because the risks are different. We need to focus on the sites with the highest potential for "bad" land use, such as where kids are and where there are bare soils. If we have to administer this locally, we will need money because this will be a low county board priority.

**Jeff Lyon**—50,000 acres sounds like a lot, but where is the highest risk? This may not actually be a huge problem. My map has a lot of red dots on it, but for years it has been paved over by concrete. The change in land use is a concern. Also, have concern for growers and their potential liability.

**Rick Stadelman**—Questions raised for him include: When should the property owner be required to disclose? To what extent? What detail of testing should be required? What is the cost going to be?

**Jeff Phillips**—People won't pay attention until it hits them, which is during property transactions. So, we need to work with the realtors and bankers. We need testing standards—who does the testing? Where? When and where to report it? There may be interest at the local level, however, local governments have a very full plate. If looking at local governments providing help, we'll need funding and people on the ground.

**Cindy Brown**—There is fear of the unknown. We need standards. We are trying to keep farmland in farmland. Is there a way to keep orchards in orchards?

**John Kisiel**—There is a lack of an accurate use history. The tendency of government is to look broadly, but a one-size solution isn't going to work. Have concerns about past and future liability for current, present and future landowners. Also, concerned about the salability of sites—saying a site "may have arsenic" on it will decrease property values and put a crimp in economic development. We need more information on risks and combined lead arsenate risks.

**William Greaves**—Need education and accurate information so as not to cause more confusion.

**Art Harrington**—We need to determine whether this industry segment issue is so different that it needs separate or different disclosure.

**Mike Krutza**—This is a citizen question for all of us. We need to find a balance. If there are agency conflicts, we need to resolve them. Citizens need to know who to go to and what to do. We need to find common ground.

### **Meeting Summary and Future Meeting Dates**

Lori Bowman informed Task Force members that today's power point presentations can be found on the web site (<http://leadarsenate.wi.gov>) for review. If anyone is interested in reading Wisconsin Administrative Code or rules, links are provided. If other information is needed, please let us know and we will include it on the web site.

Chair Krutza thanked presenters for their presentations. Lori Bowman provided information about future meetings. Because of members' busy schedules, there will not be an October meeting. The next meeting will be Tuesday, November 28, 2006, in the DATCP Board Room (Room 106), 2811 Agriculture Drive, Madison. Information will be sent to members in preparation for this meeting. A subsequent meeting will be held in January, and Lori Bowman will send an e-mail about possible dates.

The meeting adjourned at 3:20 p.m.

Respectfully submitted,

Kristina Gordon  
DATCP

Approved: 11/28/06

## **DATCP Lead Arsenic Task Force**

November 28, 2006

Minutes - Approved

**Members Present:** Rick Busch, Tim Clay, William Greaves, Art Harrington, John Kisiel, Mike Krutza, Tom Larson, Jeff Lyon, Chuck Maenner (for Anna), Jeff Phillips, Bob Selk, Rick Stadelman, Matt Stohr and Norbert Theine.

**Staff and Others Present:** Jeff Ackerman, Lori Bowman, Duane Klein, Mark Giesfeldt, Kris Gordon, Rick Graham, Jennifer Heaton-Amrhein, Jane Larson, Ed Lynch, Len Polczynski, Bruce Urben and Chuck Warzecha.

**Members Absent:** Cindy Brown, Robin Shepard and Andy Wallander.

The meeting was called to order at 9:33 a.m. by Chairman Mike Krutza. Roll call and introductions were made.

The minutes of the September 25, 2006, Lead Arsenate Task Force (LATF) meeting were approved by unanimous consent (Rick Stadelman/Bob Selk).

Lori Bowman reviewed the LATF goals for this meeting and for future meetings. Disclosure and sampling will be discussed at today's meeting. The LATF needs to make recommendations, identify challenges to be faced, come up with ideas for education and outreach, and decide when and what to report to agencies. The January 24 meeting will focus on investigations and technical issues, and there will be a wrap-up in February and a draft report completed.

### **Diversity of Sites**

Jeff Ackerman and Rick Graham of DATCP's Agrichemical Management Bureau gave a presentation on the diversity of lead arsenate sites. The presentation is available at <http://leadarsenate.wi.gov>. The Task Force should think about the diversity of sites in three ways—land value (location), ranges in concentration and land use. In some cases, clean-up costs could exceed the value of the land.

There was a discussion about the risk tolerance for the average residential home that has ground cover. Chuck Warzecha said that a two-foot area outside of the house by the drip-line is often a higher-risk area where bare soil gets tracked into the house. Also, play areas and gardens are high-exposure areas. Exposure is mostly through ingestion when it gets on hands.

### **Disclosure: What is Currently Required?**

Chapter 709 (disclosures by owners of residential real estate) was provided to members, and Bowman explained what is currently required. In getting a frame of reference, she reviewed what information and education is required for lead-based paint. Disclosure is required at property transactions and on property condition reports. The following questions were raised about disclosure:

Stadelman—At what point does a realtor feel that something needs to be disclosed? Tom Larson said that if something is known, there is a duty under the law. If something isn't known, there is no duty. The gray area is "if you have reason to believe" which is dependent upon specific facts in a case. Because it can be a litigation issue, it is a good practice to disclose, and the WI Realtors Association encourages members to make disclosure.

Stadelman—When should there be a “duty” to disclose? Mark Giesfeldt answered that practically speaking we do not have reportable numbers. The standards in 720 are clean-up standards, not reporting standards. There are only a few numbers in 720 for clean-up.

Norbert Theine—Disclosure should be based on whether or not something is a problem. We should know those reportable levels before requiring disclosure.

What about other areas of the state where lead arsenate was used—should disclosure be required there? Bowman said that the Task Force is focusing only on orchards (cherry/apple) because of repeated, concentrated applications of lead arsenate over many years. These are limited areas that are not moving—we may have to look at other areas later.

Art Harrington—He sees the primary concern being public health, and wonders if this is a significant public health issue. How does this compare to other public health issues dealt with by the state? How big is the relative health risk of orchards compared to other industries? He feels this is a very important precedential issue, and we need a framework to explain why we are singling out orchards as a relative health risk.

Bob Selk—It is too much for this Task Force to look at all the possible relative health risks for all agricultural activities. We need to look at the risk, especially to children, related to past lead arsenate use, and risk depends on the current use of the land.

Jeff Phillips—We need to look at exposure levels across the board not just for orchards and need to say if we are exposing residents of this state to two unhealthy, toxic metals. If we have a standard for lead in soil, is that what we need to look at?

John Kisiel—Looking at a “level” depends on sampling. He is not advocating that we do sampling, but many developers do sampling to determine past uses on agricultural lands. If sampling is required, the cost needs to be reimbursed and direction provided on what to do depending on the results of sampling.

Harrington—A statement/analysis is needed as to why this issue is different than all the other industry segments. Selk replied that conversion from orchards to residences and other uses is the justification to look at this issue. If the land were remaining in orchards, this would not be a problem.

Larson—Are there more conversions now than 5 or 10 years ago and is that why this is an issue now? Bowman answered that potential old orchard sites have been mapped out and about 25% of old sites are now in incorporated areas.

Warzecha—Before the next meeting he will put this issue into perspective regarding the range of things that we are already regulating (environmental hazards). We are trying to answer the question about what level of response is appropriate based on our regulations.

Kisiel—How have other states dealt with this issue? Bowman answered that every regulation is slightly different. Staff looked at what they did and where they did not succeed. Washington came up with some recommendations that did not mesh well with the regulatory environment, so they can't implement the recommendations of their Task Force. In the past, we have dealt with orchards on a case-by-case basis. The relative risk for orchard levels is low compared to other sites. We are seeing increases in the number of calls we receive, but we don't know conclusively how many sites we have to deal with. Now we are finding that a case-by-case basis doesn't work well because of development pressures. We want to give a clear, consistent message on how to deal with this by using a practical and economical approach. Our focus is narrow because we deal with agriculture, but this could potentially have cross-over impact to other programs.

Jeff Lyon—What is wrong with the real estate disclosure we have right now? Selk pointed out that the current disclosure form says that property that has not been inhabited is not included. Larson said it is true that disclosure applies only to 1 to 4 dwelling units. Larson worked with staff to copy and distribute the Vacant Land Offer to Purchase which says that seller is required to provide a real estate condition report acknowledging in line 66 that there are no “conditions constituting a significant health or safety hazard for occupants of Property.”

Dr. Greaves—His main concern involves the public health issue, the level of materials and the amount of exposure. This could be a low exposure situation that down the road becomes a high exposure situation. How do you help people avoid changing from a low exposure into a high exposure situation? We can't assume that high contamination is high exposure.

Bowman—What are some low cost ways to mitigate risks, be consistent with regulation, and maintain mitigation if ownership changes? Phillips believes the key to balancing risk is to know what the level of contamination is at the property. We are dealing with properties that have a high probability of being contaminated. We can give property owners information about what to do, but we first need to know the lead and arsenic levels on sites.

Rick Busch—There are old orchards in Gays Mills currently being used in many different ways. Some people only use the land 10 days a year, some cabins are used one or two times a month, some homes are used by retired couples with grandchildren. Which owner is responsible for testing and who is responsible for payment?

Theine – Orchards are being converted due to development pressure, but apple production has been constant despite conversion. Orchard owners have become more productive and efficient.

Krutza—It is not clear what the contaminate levels are and what the health-based standards are. Phillips believes the number discussion is eventually going to drive the disclosure discussion.

Clay—What is wrong with the current system? This led to a discussion on the level of awareness in the realty community. Larson explained the handout which was the October 9, 2006, issue of “Legal Hotline Hottips” disseminated by the WI Realtors Association to realtors. The article on old orchards and lead arsenate pesticides included a tip to use the Lead/Arsenic Pesticide Addendum form with sites that have been orchards. However, this addendum is not a required form—only real estate forms approved by the Department of Regulation and Licensing (R&L) are required to be used.

Clay--Has there been any curriculum updates to reflect this form? Larson said he feels this will probably be added to the real estate curriculum approved by R&L.

### **Current Information Tools—BRRTS, GIS Registry and Deed Restrictions**

Ed Lynch with the DNR's Remediation and Redevelopment Bureau gave a presentation on and demonstrated DNR's BRRTS system which tracks contaminated lands. See his power point presentation on the Task Force website at <http://leadarsenate.wi.gov>. The BRRTS system can be found at <http://botw.dnr.state.wi.us/botw/wel> and the GIS registry can be found at <http://dnr.wi.gov>. Sites are entered in the BRRTS system based on sampling and testing to prove contamination.

Lyon—Is there a duty on the part of a seller or title company to search the BRRTS/GIS sites? Giesfeldt said there is no duty at this time. DNR is still working on an outreach component to let people know about these websites and encourage title companies, lenders and others to use

them. It is easier to change deed restrictions in this system by putting an updated letter in the file.

Harrington—Some obligations run with the land. A deed restriction will show contamination but not the restrictive covenant. This is a duty of the buyer. If this information is missed by a buyer, it depends on the broker contract whether a broker has any obligation to disclose.

Larson—This system is probably only used in more sophisticated real estate transactions (commercial) and doubts many residential customers are using it. He suggested a link to BRRTS be included on the website listing new homes.

Chuck Maenner—How does the system work if a larger piece of contaminated property is subdivided? Giesfeldt answered that it would be a revision. The contamination stays where it is, and the part that is clean would be carved out. If there is a sign-off letter, it follows the entire property. Harrington cautioned to be careful about subdividing and when to get DNR involved because that subdivision can create liability problems (for example, subdividing a property in BRRTS could result in cutting a groundwater plume in half). Larson said most lenders require a Phase 1 as part of a real estate transaction. Clean-up is part of the lending process, and if high levels found then sampling is done.

Krutza—How does BRRTS help assess or predict the risk for lead arsenate? Lynch replied that BRRTS provides information about known contamination sites in the state not just lead arsenate. There are about 40-50 lead arsenate mix/load cases identified by DATCP as open sites in the system. The land owner would not know it is on BRRTS unless they are part of the investigation or once it is closed.

Theine—How many of the mix/load sites have been identified to the property owner as contaminated? Ackerman said only the mix/load sites that have sample reports and are being addressed by DATCP have been identified to property owners as being contaminated.

Warzecha—The home owner needs to be aware of any possible lead arsenate contamination and decide how to deal with it. We should look at each side--land use and contaminate levels--on its own merits. Disclosure is a good tool but first people need to know about lead arsenate. A statewide press release has been done, as well as service announcements, but people may not know it relates to them. We need to look at how we make people aware of the issue and how to manage risks.

Theine—At what point is the land considered contaminated by lead arsenate? Warzecha said anything above known background (5-10 ppm) concerns DHFS because it is higher than naturally occurring and because it is in a different form. A lower level than background is ideal from a health risk, but we know we cannot clean up background so we use a more aggressive response if levels are higher.

Lyon—How long before an exposure becomes dangerous? Warzecha answered that at mix/load sites short-term exposure could have consequences. For other sites, it may take 10-30 years of exposure before it becomes dangerous.

Larson—How much dirt would a child have to eat to be hazardous? Warzecha said they assume 200 mg a day of soil is ingested by a child (can range up to 5000 mg). Health effects are seen at lower levels of exposure for these metals.

Based on the morning's presentations and discussions, Chair Krutza asked Task Force members to identify one or two questions they have that need to be sorted through, clarified and answered. Following is the list of those questions:

- Larson—Still trying to get my arms around the problem: The number of orchards, the potential for people to come in contact with lead arsenate and the health effects, and problems with awareness. Why are we focusing on the point of transaction instead of trying to get all current property owners this information?
- Theine—Is the conclusion that anything above background is hazardous? Has anyone looked at tax incremental financing districts to help pay for clean-up costs?
- Phillips—Why are we not focusing on current owners/occupiers of these former orchards, as well as future occupants? Also, there are some standards set but are those a starting point or are they the standards we want?
- Greaves—Is there a role for human health effects or is this strictly an identification and disclosure activity? If you are trying to state that certain levels are hazardous, it is a much more complicated approach than just identification/disclosure.
- Busch--At what levels of contamination and under which activities is there a risk that needs to be addressed immediately or at the time of property transactions?
- Clay— Land use change is a particular area of concern. Most of what we are talking about is being good educators—do not have people go through the NR 700 process to find out they don't have a problem because it can be fairly expensive. Forcing people to go down the NR 700 path just to quantify sites is bad.
- Stadelman—Still have concerns about how we define an orchard; commercial vs. family may not be distinguishable. I think we can set different levels of action for different potentials/ranges. There will have to be some buyer responsibility for schools/parks and maybe have different requirements for residential owners and developers.
- Selk—How do we accurately identify orchard sites of concern? Goes beyond historical use to testing. How do you accurately develop a sampling process for orchards? Will identify areas of increased public health concern and will eliminate other sites. Don't want to have a bigger net than necessary. What is the best mix of responsibility to current owners, to those involved in real estate transactions, and those who want to purchase? Much bigger than just a transaction.
- Lyon—Not convinced that there is a public health risk. What is the real risk? How many people? Regarding the disclosure process, what's wrong with the current process? A developer in Door County should assume a site might have been an orchard and do some testing with buyer and seller working out the price. If we start with orchards, will we eventually be requiring this for other agricultural lands?
- Maenner—Seems like there is a system in place between the buyer and seller that allows for disclosure so does DATCP need to be involved? Who is going to be responsible for testing? The use of chemicals was legal at the time.

### **Current Information Tools—DATCP Web-Based Potential Orchard Locations**

Duane Klein's presentation identified where old orchard sites existed based on aerial photos. A site was considered an orchard if it had from 8-10 trees. However, this is not a complete set of data because not all counties had aerial photos. The timeframe for these photos (1930s-1940s) is when lead arsenate pesticides were potentially used on approximately 50,000 acres of

orchards of which 20-25% are now in cities or villages. A handful of the orchards are now schools or day care facilities, 40 orchards are within 100 meters of a school or daycare, and 450 orchards are within 500 meters of schools/day care facilities.

Stadelman—Do we treat already developed properties the same as those that have not been developed? We need to define what is considered urbanized, especially in looking at jurisdiction issue and urban development. Towns should be considered the same as cities/villages because they can also be very developed.

Thiene—Whose responsibility is it for clean-up if the school came after the orchard? Orchard processing sites should also be included along with mix/load sites.

Greaves--Could you add to the database over time? Look at areas from that time period to overlay with today's sites. Klein said sample results could be included as we have them and we could use landmarks to help people identify potential sites.

Larson—Concerned that these maps could stigmatize a lot of properties with the red dots even though testing shows no contamination, especially since we do not know how much, if any, pesticides were used in small orchards. How do you avoid this phenomenon?

Stadelman--Is there an inventory of commercial orchards? The Wisconsin Agricultural Statistics Service (WASS) has information on the number of acres with apple trees in the state and how many in each county. However, this information does not distinguish between commercial and family orchards. WASS collects this information via a telephone survey and data is identified by parcel.

Lyon—Is DATCP getting more calls from current owners of developed areas or from people wanting to develop former orchard land? Klein answered that DATCP receives some of each type of call.

Thiene—It isn't just the city and village kids we should be concerned about but also children living on orchard sites. Larson added that if lead arsenate is a health risk, we should be concerned about current owners as well as future owners.

Selk—A health risk is created only when orchard land use changes to something else. Busch asked how many health problems can be directly associated with lead arsenate exposure? Warzecha said the types of health effects we are talking about cannot be traced back to any one cause. There may be multiple causes so only estimates can be made.

Greaves explained that the major issue is the latency period for carcinogens—*asbestos* exposure is 35 years and lung cancer from cigarettes is 20 years. A literature search for studies or case reports could be done. DHFS has done studies that show a correlation between arsenic exposure in drinking water and certain types of cancer at rates consistent with what is expected. It is easier to project carcinogens in water than in the soil.

Bowman—The charge of this group is to come up with practical and economical ways to deal with contamination issues. We need to help people make informed decisions and to mitigate any risks.

Lyon—Need to feel comfortable that the risk is significant enough to do something about, so he needs to learn more because not sure this is a big issue.

Stadelman—Concerned about using the DATCP database to identify orchards that may have used lead arsenate. Klein asked if taking samples would make this database more useful.

Selk—What does sampling to identify lead arsenate use cost? Warzecha replied that it costs \$30-50 per soil sample. Sampling would only be done in areas where a health risk has been established. Some sites would need more than one sample while others would need only a composite sample.

Clay—I'm more concerned about the costs once a site shows lead arsenate contamination.

Theine—Would the state determine background lead arsenate levels in every site? Warzecha reported that DNR is working with USGS and NRCS on a study to establish background levels for the entire state. The property owner can establish that background information themselves by measuring orchard and non-orchard land.

Stadelman—BRRTS has identified a much higher level of contamination. He's not comfortable with every red dot being required to sample. Buyers do have some responsibility and can request sampling. Commercial operations should be held to a higher standard than family/small orchard operations.

Phillips—We should do some type of a background study on the 50,000 acres to get a handle on the problem of small vs. large operations and risk-free vs. risk operations. Do an assessment of concentrations and look at gradation of sites small to large, and start eliminating certain sites that survey methods show are not as much of a concern. Klein said that people won't let staff on their property to sample because of the possibility of being thrown into the NR 700 process. Phillips wondered if people could be granted immunity from the process if they agree to participate in the survey.

### **Sampling Survey**

Bowman reviewed the results of the disclosure and sampling opinion survey and some of the issues raised by members.

Because of the many issues raised at today's meeting, Chair Krutza suggested that they be grouped and the following three subcommittees be formed to discuss them:

- 1) Size and Scope of the Health Risk—Define and decide the scope of the health risks. If we know it fine, if we don't, what do we need to do to define it? What are the current gaps? Make observations with respect to disclosure and sampling. Subcommittee consists of Dr. Greaves as chair, Chuck Warzecha, Jeff Phillips and Jeff Lyon. (Robin Shepard also agreed to be on this subcommittee.)
- 2) Size and Scope of Orchard Sites/Potential vs. Known—Define the size and scope of the actual orchard issue (50,000 acres); don't want to scare the public. What is the definition? Subcommittee consists of Duane Klein as chair, Rick Stadelman, Bob Selk, Anna Maenner and John Kisiel. (Matt Stohr also agreed to be on this subcommittee.)
- 3) Disclosure/Due Diligence—Issues of disclosure and sampling. What are the appropriate disclosure requirements for the various players in these issues? Subcommittee consists of Tom Larson as chair, Tim Clay, Rick Busch and Norb Thiene. (Art Harrington also agreed to be on this subcommittee.)

Krutza advised that whatever is created from these subcommittees has to be practical, economical and protect the citizens. Recommendations are to be reported at the January 24 LATF meeting. Bowman offered the resources and staff at DATCP to help schedule these subcommittee meetings in Madison or elsewhere.

## **Education and Outreach**

Education and outreach as it relates to disclosure and sampling should be part of each subcommittee's discussion.

Stadelman—Are schools/day care facilities/local officials aware of this issue? What is out there now? Do we know how to contact day care facilities? Bowman will research this and get back to him. Larson said there is a “prospective buyers beware” brochure and a few handouts available but nothing specific to lead arsenate. DNR's website includes information and a fact sheet on contamination concerns and steps to take. There is a link from DNR to the LATF website.

Site investigations and remediation will be the topics for the January 24 LATF meeting. The plan is to have a draft report available for review at the February 28 meeting.

Meeting adjourned at 2:44 p.m.

Respectfully submitted,

Kristina Gordon and Jennifer Heaton-Amrhein  
DATCP

**Approved:** 1/24/07 with correction to page 2, paragraph 2, to add language after the word “believe.”

## **DATCP Lead Arsenic Task Force**

January 24, 2007

Minutes – Approved

**Members Present:** Cindy Brown, Rick Busch, Tim Clay, William Greaves (via phone), Art Harrington, John Kisiel, Mike Krutza, Tom Larson, Jeff Lyon, Anna Maenner, Jeff Phillips, Bob Selk, Rick Stadelman, Matt Stohr and Norbert Theine

**Staff and Others Present:** Jeff Ackerman, Lori Bowman, Duane Klein, Kris Gordon, Rick Graham, Jennifer Heaton-Amrhein, Ed Lynch, Kathy Pielsticker, Len Polczynski, Justin Shell, Bruce Urben and Chuck Warzecha.

**Members Absent:** Robin Shepard and Andy Wallander.

The meeting was called to order at 10:04 a.m. by Chairman Mike Krutza.

**Review and Approval of the November 28, 2006 Meeting Minutes:** The minutes of the November 28, 2006, Lead Arsenate Task Force (LATF) meeting were approved by unanimous consent with the addition by Tom Larson to add the words “which is dependent upon specific facts in a case” after the word believe on page 2, paragraph 2 (Rick Stadelman/Tim Clay motion).

**Review of the Goals for the Meeting:** Krutza reminded members that the LATF recommendations need to be practical, economical and protect the citizens. Bowman reviewed the goals for today’s meeting, including reviewing and discussing the subcommittee recommendations and discussing site investigations and clean-ups.

**Review/Discuss Task Force Timeline:** Bowman said that because more subcommittee meetings are necessary, the initial timeline of the LATF will need to be spread out. She proposed that time be spent by subcommittees in February looking at the large-scale issues of site investigations and clean-ups and that the full LATF meeting be postponed from February 28 to mid-March. Staff will compile information from the subcommittee meetings to be discussed at the March meeting. Another meeting will be scheduled in mid to late April to discuss a draft report with a brief meeting in May to adopt the final report. Heaton-Amrhein distributed calendars and members were asked to indicate with an “x” the dates in March, April and May where they had conflicts. (Note: The schedule of meetings listed above did not happen).

### **Review and Discuss Subcommittee Meetings and Recommendations:**

- **Disclosure**—Tom Larson gave an overview of the subcommittee’s January 4 discussion. The subcommittee concluded the following: (1) Known contamination above a specified level is a defect and must be disclosed; (2) “Gray areas” in the law exist where a seller “should have known” about a defect and must disclose. This is a difference between a statutory requirement and a common law requirement. These “gray areas” are usually decided through litigation; and (3) There are no known tools for state-wide orchard identification other than the air photo method used to develop the DATCP web site.

It was agreed that the issue of how many parts per million (ppm) is considered dangerous exposure is a key determining factor of when and when not to disclose. The subcommittee talked about the history of disclosure, the purpose of disclosure and what constitutes a defect, and the current disclosure responsibilities. The following recommendations were made: (1) The current disclosure laws are adequate; (2) Fact finding (intensive inquiry) is necessary in those gray areas where a court may find that

there is a duty to disclose; (3) There are no good tools to identify contaminated orchards and there is a need to have a GIS type of program to better identify these sites and avoid statewide panic; (4) There is a need to have a more extensive education and information program for property owners, those people that deal with real estate transactions, and health care officials; and (5) DATCP needs to develop ways to increase awareness. The committee did not recommend any additional disclosure requirements at this time but suggested DATCP monitor the situation and, if necessary, modify requirements when a need arises.

The subcommittee recommended the voluntary lead arsenate addendum form be reviewed to make sure it accurately reflects the LATF recommendations. There was extensive discussion about disclosure, and whether incentives, such as liability protection, could be offered to property owners to encourage them to test their property and disclose the results during a real estate transaction. The subcommittee discussed numerous mandatory disclosure scenarios and decided that it is too difficult to define the gray areas outside of a specific fact scenario. However, if a seller knows there is contamination, there is a clear duty to disclose. GIS may be a way to help better identify the possible contaminated sites. DATCP will consider developing a GIS database and will be looking for the LATF's recommendations to help scope the project.

Some Task Force members felt property owners should be required to disclose that the property had been an orchard and therefore was possibly contaminated. These members felt it should not be a "buyer beware" situation because real estate transactions should assist in protecting public health. However, if the state requires disclosure for all orchards than it would also have to require disclosure related to other land use issues, too. Theine suggested there be a question about land use on the property information report (similar to the flood plain question). This is a reporting mechanism that municipalities are required to provide through the realtor or title company. This information could then be available to the buyer and along with property disclosure by the seller, there would be the ability to cross-check a property. Stadelman clarified that this is not a statewide uniform process. Maenner asked if there has been any testing done on other crops to determine if this is an orchard issue or a chemical use issue. Klein stated that the primary reasons for the focus on orchards are 1) they are easy to identify on aerial maps because of the trees and 2) other crops where it was used had more tilling so lead arsenate is not at the same concentrations on the surface soils. Lead arsenate was applied in orchards at higher rates and frequencies with no crop rotation, so the department suspects there are higher concentrations at orchards. Testing has not been done on many types of fields because the department has not received permission to test for lead arsenate.

Selk felt there should be a requirement to disclose a known prior historical orchard even in the absence of testing. Maenner suggests a liability shield to take away concern about testing. However, this shield would protect from government action only, not civil action. Theine found out that it is \$67 per sample to test for lead arsenate.

Larson summarized the subcommittee's recommendations in two points: 1) No additional disclosure requirements and 2) Direct DATCP to provide education about the issue and disseminate materials to appropriate people.

Chairman Krutza asked for LATF members' perspective and received the following comments: Maenner agrees with the report; Clay agrees with the subcommittee's recommendations and says the electronic database is important in order to get accurate information; Theine agrees with recommendations; Busch is comfortable with the recommendations; Kisiel agrees; Lyon agrees; Brown agrees; Selk agrees with

education recommendation but has concerns about the disclosure recommendation because he believes disclosure should be required when an owner knows, with or without testing, that there is possible contamination; Stohr wonders about the magnitude of health risk and the magnitude of orchard sites; and Phillips agrees with the education component and the need to establish a good database for use as a way to aid disclosure and make people aware of old orchards.

- **Size and Scope of Health Risk**—This subcommittee concluded the following at its December 21 meeting: (1) Overall, this is a low health risk for Wisconsin residents. However, it is large in scope due to the number of acres and statewide distribution of these acres (not all members agreed on this point); (2) It is reasonable to deviate from the health standard of one in one million to ten to the minus six for these contaminants given that naturally occurring arsenic (background) is significantly higher than this standard and the overall health risk from exposure is low; and (3) The current regulations--**as applied**--are cumbersome and costly and need revision or need to be applied differently.

Greaves summed up the subcommittee's recommendations as follows: 1) We need to look at literature and find out what is being done in other states; 2) state agencies need to establish a consistent level at which lead arsenic becomes a health risk so that people know what to expect and can act upon the data; 3) state agencies need to provide direction, education and information for people to make informed decisions and need to communicate with the public 4) state agencies need to review the existing NR700 regulations for their flexibility and establish procedures to ensure a common approach.

Maenner asked for an example of a low health risk. Greaves said someone exposed to a particulate in the air causing an irritation of the eyes and the upper respiratory tract would be considered a low health risk. OSHA standards and ACGIH recommendations have a safety factor of only 10 (low risk). Ten to the minus six is a standard used for cancer causation. In this case, lead is not known to be a cancer-causing agent. Arsenic in high levels is a skin cancer causing agent, but there is poor data about the impact of arsenic in low levels. Another comparison is the drinking water standard where there is an increased cancer risk from one in one million (protective level) to one in 100,000 (increased cancer risk). Arsenic above these levels would trigger some type of action, and drinking water is the first point where we are concerned. Based on concentrations in the soil, arsenic found in orchards generally are in the low range, except at mix/load sites. We are in the lowest levels of where we are starting to do something about it in the regulatory process.

Krutza reminded members that citizens' health is the driving point. Bowman said lead arsenate is not an acute toxic issue, but because of the scale of use (50,000 acres) it impacts a lot of property. If the department does not raise awareness of levels at orchards, this may cause us to not map mix/load sites where there is more of a health risk. A subcommittee will look in detail at the flexibility within the current regulations.

Kisiel pointed out the disclosure/remediation issues can be narrowed down because high concentrations of lead arsenate typically are found only in small mix/load areas of the state (with a few exceptions). Phillips agreed that it is important to gather data and narrow contamination down to actual sites. Bowman said the department is also looking at gradation (scale issue) depending on how long and how much pesticides were used and the type of orchard. Warzecha agreed that we need to determine the point where contamination triggers action such as site investigation and cleanup. The Task Force should decide the requirement for site investigation and cleanup (necessary regulatory

action). It was suggested the department offer an incentive for people to take samples and gather data.

When the concept of full site investigation and cleanup is applied to single residential properties, the subcommittee felt the level of financial resources available, scale and need for a certified consultant are not the same as for developing properties. We need to look at the flexibility of regulations and how to apply it to different types of sites.

Urban said that NR 700 was created to provide a consistent cleanup approach--regardless of contaminants--for groundwater standards. If the LATF believes that orchards are uniquely different, this needs to be substantiated and the departments will need to look at other regulations besides NR 700. Kisiel wondered what standards are used elsewhere and sees the need to explore these for help in designing new standards. Clay would like a perspective of the risk and to look at expectations based on the site and level of contamination and to look at options ranging from proper hygiene to cleanup at the site. We need to encourage sampling at sites and lay out the expectations for sample handling.

- **Size and Scope of the Orchard Problem**—The following two conclusions were reached by the subcommittee at their January 3 meeting: (1) More work is needed to feel secure about the accuracy and appropriate use of DATCP's database of old orchard sites, which is based on air photo interpretations, and (2) Property owners deserve to know that their property has been identified and have an opportunity to provide information about historical use of lead arsenate in orchards on their property prior to making the database public (due process issue).

The subcommittee talked about whether this is a big versus small orchard issue. They also talked extensively about the current database made up of aerial photos from the 1940s. Photos are not available for the entire state and the database does not include Door County because it has its own database.

The proposed Task Force recommendations include: Take steps to validate the data; notify property owners of the database's existence and how it will be utilized, and give them time to respond to their being on this database before going public; identify a process for property owners to follow to come off the database and indicate sources of information available to them. Also, the database needs to include new orchards and those orchards that are in a new location from the original location. Before deciding the use of the database, we need to do an assessment of how the database will be used. More information and education is needed and should be designed for different target groups, such as schools, day care centers, and recreation and park groups. The report should include a strong reference as to why both commercial and private orchards are a concern and cite known data.

Stadelman questioned whether the aerial photos are reliable enough for us to take the next step. He said he would be comfortable if the data was released as long as cautionary statements about its limits are included. Selk said the department should work to identify through GIS all historical orchards where the probability of lead arsenate was applied. Additional information would be added in layers from the results of tests so that we would have a relatively error free database that is constantly being improved and corrected. However, it cannot be 100% accurate so disclaimers should be included to avoid panic.

The big emphasis for this subcommittee is that DATCP needs to notify current property owners and should decide how to implement this and what resources would it take.

Phillips said the current database is a good starting point and suggested developing a partnership with counties to get information to owners via their treasurer's office. Having an accurate database would put the responsibility on the property owner/developer to do testing. Stadelman expressed a concern about the current database being released to counties before making sure how the data will be used. The fact that a property was an orchard does not mean there is contamination or that the level is dangerous. He said that any release needs to clarify that the current data is part of a working document and include a disclaimer. Several members felt the database is not reliable and making it reliable should be a Task Force priority.

#### Discussion on Technical and Policy Issues Related to Site Investigations and Clean-ups:

Bowman recapped the earlier conclusions from the subcommittees as follows: (1) We need to determine a number where we feel there is contamination and the contamination poses a health risk (analogy of a dimmer light switch); (2) If the data shows contamination, decide what needs to be done; and (3) There are concerns about the NR700 (investigations and cleanups) process and flexibility. Other questions and concerns that members want addressed include making sure the risk fits the remediation (Maenner); recommending a tiered response approach (Clay); and suggesting a gradation of actions from small to NR700 process (Phillips).

In answer to a question of flexibility with NR700, Urben stated that it is a self-implementing rule established in the mid-1990s so there were consistent cleanup standards. The responsible party chooses the pathway for its case and there is site specific flexibility in reporting, site investigating, choosing a remedial option, public input and closure. Phillips is concerned about the costs and practicality for the property owner if sample results require them to follow the NR700 process. Theine asked about the range of required remedial actions, the costs assigned to them, and at what point is the property owner becoming aware of the issue. Bowman explained mitigation issues, depending on the concentrations of contaminated soil on the property, to limit access or cover soil. Urben said the responsibility is that future property owners know what the remedial actions are with two kinds of closure and no impact in the future through the GIS Registry—clean closure (took care of it) or keep land use controls. A change in land use and a sample showing contamination above background level would trigger the need for the NR700 process through DNR. Klein said in most circumstances the background level of lead arsenate is enough to require the process if there is a change in land use so we need to decide on a number. DATCP follows an administrative rule to oversee site investigation and cleanup and is required to utilize NR700. The remedial action taken on a site depends on the results of an investigation.

Phillips finds it problematic to get people to realize a health problem because they won't want to do something about it because of the costs. He said we need a way to use the results of the initial sample done by the owner to assess the property or have samples taken by the local health department with a copy of the results to the owner. DNR has worked with property owners in uncomplicated situations by having an owner come up with a plan, implement it and then close it. There is no notification system for a change in land use and a change would not be recognized by state agencies so enforcement would occur only if there is a complaint. We need to have an additional discussion on agency reporting requirements, which is an agenda item for the next meeting (exemption, reporting to agencies and enforcement of the spill law).

A site investigation triggers sampling, but there are disincentives to initial sampling because of the potential need for hiring a consultant and a possible decrease in property values from being listed on DNR's GIS Registry. Clay questions the formality of this process for potentially 50,000 acres affected. He would like to see results of samples and land use reports because he believes most of these acres have not had a change in land use and would not require the

NR700 process. DNR and DATCP are putting together a document explaining what triggers the NR700 process.

Chairman Krutza summed up that what we have done focuses on health risk and finding “a number.” The work of the LATF could be trumped by NR700, so the number we come up with needs to be consistent between state agencies. A study is being done by DHFS and DNR to look at the background level for arsenic in the state because it is higher than the table value number in NR720. Currently, anything above background level needs to be assessed. Property owners should have a realistic assessment of their contamination level; one sample is probably not enough for a large property.

To reiterate, a recommendation of the Size and Scope of Health Risk Subcommittee is for DHFS to come up with a realistic health-based number through a literature review of other state standards and discussions between agencies. It was suggested to come up with guidance of the appropriate actions and responses based on different contamination levels. One number should be used by all state agencies. At this time, no action is being taken for sites with levels below background numbers.

Chair Krutza asked for the following member comments on the recommendations from the three subcommittees:

- Disclosure—Selk would like to add to disclosure requirements that if property owner knows it was an historical orchard site that fact should be disclosed to a potential buyer. Larson said LATF is not in total agreement on the disclosure issue. Current recommendations will be considered but that may not be what is decided at the end.
- Size and Scope of the Orchard Problem—Lyon does not feel we currently have reliable data; Stadelman said we need strong disclaimers and need to notify property owners of the new standard; and Maenner agreed to property owner notification to help validate the database and keep them informed.
- Size and Scope of the Health Risks—Dr. Greaves summed up recommendations of a literature review and establishing a “number”; doing an information and education campaign, developing materials, and having state agencies review NR700 regulations for flexibility. Krutza continues to believe that the focus is health risk, even if it is only a low-level risk. Selk cautioned that some sites may not be low risk.

In discussions with her counterpart at DNR (Al Shea), Kathy Pielsticker said that staff from DATCP, DNR and DHFS will work to reach agreement on a guide for appropriate actions and ranges that will eventually be included in NR700 (appropriate recommendations for appropriate ranges). The next LATF meeting will be scheduled after this task is completed. Krutza thanked staff from these state agencies for working on these issues.

Bowman announced that DATCP Secretary Nilsestuen received a letter from Kewaunee County Conservationist Andy Wallander resigning from the Task Force due to workload issues. Because of DATCP policy, he will not be replaced. Matt Stohr, Wisconsin Counties Association, will keep county land conservation departments informed about the work of the LATF.

Meeting adjourned at 3:00 p.m.

Respectfully submitted,

Kristina Gordon, DATCP

Approved: 11/19/2007

## **DATCP Lead Arsenic Task Force**

November 19, 2007

Minutes -- Approved

**Members Present:** Cindy Brown, Rick Busch, William Greaves (afternoon only), Art Harrington (morning only), Mike Krutza, Tom Larson, Jeff Lyon, Anna Maenner, Jeff Phillips, Bob Selk, Rick Stadelman, and Norbert Theine

**Staff and Others Present:** Mark Tusler, Brian Maillet, Jeff Ackerman, Lori Bowman, Duane Klein, Rick Graham, Jennifer Heaton-Amrhein, Ed Lynch, Kathy Pielsticker, Pat McCutcheon, Bruce Rheineck, Pat Stevens and Chuck Warzecha.

**Members Absent:** Robin Shepard, Matt Stohr, Tim Clay

Chairman Mike Krutza called the meeting to order at 10:00 a.m.

Krutza asked the Task Force members to state what would make this "a good day". Most Task Force members responded that it would be a good day if there is consensus on a standard that protects public health and if they understand the consensus approach of the three agencies. One task force member wanted to find a way to provide an incentive for landowners to sample.

**Review and Approval of the January 24, 2007 Meeting Minutes:** The Task Force approved the minutes of the January 24, 2007, meeting by unanimous consent (Harrington motion).

**Review of the Goals for the Meeting:** Bowman reported on the work of the three agencies, reviewed the task force objectives and discussed the questions that remain. Bowman explained that at this meeting the Task Force would discuss the NR 700 process and the flexibility within that process and review the draft preliminary task force conclusions and recommendations from January. Bowman also reviewed the timeline for the Task Force, which will conclude in January with a report to the ATCP Board in the spring of 2008.

### **Report on Arsenic Background Study**

Lynch provided the Task Force an update on the Arsenic background study. He said that they only have raw data from the southeastern part of Wisconsin right now. Final study results will be available in a year and a half. The study is expected to help streamline remedial activities as individual property owners will no longer have to establish site-specific background numbers and it will be easy for people to know if they are above background or not.

### **Proposed Arsenic action levels for sites contaminated by historic use of lead arsenic pesticides.**

Warzecha presented information related to possible arsenic action levels. He reviewed arsenic toxicity and sources of risk. He discussed the proposed background and 100 ppm levels. He stated that if we require people to do something, we have to make it practical and economical and eligibility for ACCP makes this possible. DATCP can require a full ACCP site investigation at lower levels depending on different land use scenarios.

Maenner asked what type of sites, besides orchards, would be over 100 ppm? Some examples of other sites include coal storage sites, manufactured gas sites and wood-treating facilities. Wisconsin doesn't have many smelting facilities, but those are prevalent sites in the state of Washington.

Theine raised questions about whether or not farmers understand that by allowing wastewater treatment plant sludge on their land that they will have a contaminated site. There was some discussion about this point. Warzecha said they could come up with some data about mass balance.

Stadelman asked about outliers on the background study, with the thought that outliers might be beneficial in demonstrating the validity of the study.

Maenner stated that if we do information and education we should do outreach about all sources of arsenic and how land might be impacted by any of these sources. Bowman said that the Task Force could make this type of I & E recommendation if it desires.

### **NR 700 flexibility and scenarios**

Klein and McCutcheon presented the information on the agencies' consensus related to existing flexibility within NR 700. Klein explained that what has changed since January is a mutual understanding that:

- Property owners may not need to hire a consultant
- Some property owners can conduct an investigation themselves
- There is no need for property owners to sample off-site
- Many landowners can implement a remedial action themselves
- Grass cover can be an acceptable land use control
- Some cases may remain open

There was a long discussion about the flexibility in NR 700. Selk asked how not requiring sampling beyond the property boundary is protective. Phillips said that information and education is important, but there is also a self-generating effect among neighbors and property owners that will help get to surrounding sites. Warzecha said that the approach only says that it is not the one property owner's responsibility to do sampling on a neighbor's site; this doesn't preclude the state or local government from notifying the neighbor and informing them of the pros and cons to sampling.

Harrington asked if the scenarios look at the use of the site if grass cover is sufficient for a daycare center. Bowman replied that different land use controls might be appropriate depending on the site use. Lyon asked if the new approach would require rule changes. Klein and McCutcheon reiterated that the agencies can do everything that is being presented within the existing NR 700.

Maenner asked how many samples an average homeowner would need to take. Klein stated that 3 to 4 samples would be typical, but that more might be needed in some circumstances.

Selk asked how the department would help homeowners collect samples to make sure they are representative. Warzecha said that state of Washington put together a very good fact sheet on how to take samples.

Maenner asked how the state would deal with sites where neighbors complain that a property owner has not maintained required land use controls.

Theine asked if soil blending was a remediation option. McCutcheon said they probably would not allow soil blending for arsenic. Giesfeldt said that DNR does allow landspreading, but only as a regulated practice where certain conditions might be met. Theine asked if someone could reuse soil in a place where it doesn't present a problem, such as underneath a road.

McCutcheon said that DNR might consider road construction if someone proposed that alternative, but they would have to consider the specifics.

Stadelman asked two questions about BRRTS and the GIS Registry. 1) How extensively is the GIS Registry being used? 2) Do properties stand out a lot on the Registry? McCutcheon said that the GIS Registry is being used, but not as much as DNR would like. Generally, consultants use the site more than realtors. However, DNR used to track land use controls through recording on the deeds and the title search companies weren't finding those. He said DNR is doing a lot of outreach with those involved in property transactions. He also said that DNR could provide a breakdown on the types of hits the site is getting. McCutcheon said that there are a lot of sites on the Registry and that those involved in purchasing property are more concerned about open sites than closed sites. A site that is not on the Registry would probably have a higher market value than one that was on the site. Registry users can differentiate between those sites that are clean-closed and that that are closed with land use controls. The Task Force recommend extensive I & E related to BRRTS and the GIS Registry.

Krutza had members express their impressions of the process as outlined. Larson said that it was nice to have a process in place to address confusion. He said he doesn't know if background is a low standard or high standard and wonders how many properties will be impacted by the background standard.

Brown had questions about the sampling procedures. She said that it is not really clear about how many samples are needed for each type and size of lot.

Stevens said that the background study is very positive and that the process is very positive. He asked how many sites are between background and 100 and how many are over 100? He asked how, in the category of background to 100, you sell a lot that is contaminated (from a developer's perspective)? He also asked how the process would apply to those that have already been developed vs those that are yet to be developed.

Selk expressed concerns about property owners conducting their own sampling. He wondered what reported results less than the trigger level mean. Klein said reported results less than background are not cases. Selk said that his concern is maintaining the integrity of sampling, which is usually done through consultants. Overall, he was happy that the agencies have come together to agree on how to use NR 700.

Phillips said that he likes the options and thinks that the public will like the approach. He felt that the approach will not stop development and may actually promote it. Phillips likes the idea that if the BRRTS system is used, some professional assistance is available. He likes the fact that disclosure is required if there is not a complete clean-up, and likes that ACCP funds will be able to be used. He said that for questionable sample results, there could be some guidance that shows how things can be done and that possibly recommend a consultant be retained.

Busch likes the approach. He stated that the agencies have come a long way towards developing a workable solution that may enhance orchard values. He said that the approach gives many answers to the previously unknowns. From a sampling standpoint, he said there are lots of remedies within the offer to purchase. The key for Busch is the information and education materials and what we do and don't put in. He said that using the right wording within the educational information becomes very important, and that using the proper words to get the proper response is the most important thing.

Lyon stated that it was good that the Task Force served as a catalyst to get three different agencies to talk and come to agreement without having to change the rules. Lyon expressed a

desire for the agreement be memorialized because people in the positions at the agencies will change. He said that the gap between the background action level and the 100 ppm is large, and that the health risk still seems to be overstated, particularly at the levels closer to background, although this may depend on what the background number is. Bowman told the group that a Memorandum of Understanding (MOU) will be written which will both memorialize and provide more detail about the agencies' agreement.

Maenner stated that getting everything down on paper in an MOU is very important. She said that developers are telling orchardists that their land has no value and that this approach will confirm that orchard owners should not take threats from developers. She stated that usually the developer will end up paying the costs of the clean-up if there is one. Maenner reiterated that educational materials are extremely important. She said she is less concerned about sampling problems since testing is voluntary; a landowner who is going to take a test will want to know the results, and a developer who tests is going to use a consultant.

Theine agreed that there has to be an MOU between the agencies. He said the approach would be fraught with problems in the future if the agencies do not document the agreement.

### **Database Validation Activities**

Rick Graham presented the results of the lead arsenate sampling project conducted this summer by a TopJobs Intern. The project's purposes were to test out a new analytical instrument and to try to validate some of the points on DATCP's orchard database. The project selected probable orchard sites on state and federal lands. He stated that the project was good as an initial screening tool, but it was very time consuming to validate the information in the orchard database. The project found that lead arsenate residues in some samples, but not in all of them. The highest sample result was 50 ppm for arsenic. The project validated some of the sites, but could not validate all of the sites. Dr. Greaves said that there needs to be some additional information about the percentage of highly probable vs uncertain sites in the database compared to what was found before the results can be accurately analyzed. Other task force members reiterated that it is important to notify property owners about the database so they can verify whether or not their land was an orchard and be removed from the database if the samples are at background or below.

Heaton-Amrhein presented the comparison of orchard data gathered from the Southeast Wisconsin Regional Planning Commission (SEWRPC) in 1963 with the 1950's data gathered from the air photos. The data showed that some of the most probable orchard sites identified by DATCP from the 1950 photos were also identified by SEWRPC in 1963. However, the 1963 data identified some sites that were not orchards (likely nurseries or tree farms) and additional orchards that were not in the DATCP database. The DATCP database identified some potential orchards not in the SEWRPC data. Again, the SEWRPC data helped to validate some of the orchard sites but also raised additional questions.

### **Information and Education**

Bowman presented information on DATCP's efforts to find money for information and education related to lead arsenate. The final 2007-09 state budget did not include additional spending authority for a lead arsenate information and education program. DATCP also applied for a discretionary grant from EPA for funds for a lead arsenate information and education program. DATCP will be notified if it will receive a grant this spring. An EPA discretionary grant funded the orchard database project.

### **Horseshoe Bay**

Ackerman presented an update on the Horseshoe Bay lead arsenate cases. He stated that Horseshoe Bay is an example of how the lead arsenate program would work using the consensus approach related to the regulatory flexibility within NR 700.

### **Regulation and Licensing**

Graham reported that the next meet of the Department of Regulation and Licensing forms committee is scheduled for Wednesday, November 21, 2007. He stated that he and Klein have attended two previous meetings, but the correct form was not discussed at either of those meetings.

Larson stated that the draft preliminary conclusions and recommendations were incorrect as it related to the Disclosure subcommittee and that the subcommittee did not recommend adding a question related to orchards on the disclosure form. Larson stated that the Realtors would only support the disclosure of known contamination and that only one person on the Task Force supported adding a question to the disclosure form. He asked that this recommendation be removed. Bowman agreed that the specific recommendation in question will not be forwarded as a recommendation of the full Task Force.

Stadelman suggested that the group consider some sort of general question that could be asked to prompt potential buyers to ask the question about chemical use, such as "Has there ever been a commercial orchard on this property?" Selk stated that there is a public health concern that potential purchasers should know about. Larson stated that the Realtors have a voluntary addendum related to orchards. Stadelman asked how the Task Force could make the addendum more regularly used and if the addendum can be mandated.

### **Next meeting**

The next meeting will be December 17 from 10:00 to 3:00 pm at DATCP.

Krutza directed the agencies to bring the following information:

- 1) Draft MOU language
- 2) I & E strategy
- 3) Revised version of the preliminary Recommendations and Conclusions.

The meeting adjourned at 3:05 pm.

Approved: 12/17/07

## DATCP Lead Arsenate Task Force

December 17, 2007

Minutes

**Members Present:** Cindy Brown, Rick Busch, Tim Clay, Art Harrington, Mike Krutza, Tom Larson, Jeff Lyon, Anna Maenner, Jeff Phillips, Bob Selk, Rick Stadelman and Norbert Theine.

**Staff and Others Present:** Jeff Ackerman, Lori Bowman, Mark Giesfeldt, Kris Gordon, Rick Graham, Jennifer Heaton-Amrhein, Duane Klein, Ed Lynch, Pat McCutcheon, Kathy Pielsticker, Bruce Rheineck, , Bruce Urben and Chuck Warzecha.

**Members Absent:** Dr. William Greaves, Robin Shepard and Matt Stohr.

Chairman Mike Krutza called the meeting to order at 10:00 a.m.

**Review and Approval of the November 19, 2007 Meeting Minutes:** The Task Force approved the minutes of the November 19, 2007 meeting by unanimous consent (Cindy Brown/Rick Stadelman motion).

**Review of the Goals for the Meeting:** Bowman stated that the goals for today's meeting were 1) to address any remaining concerns related to the NR 700 regulatory approach; 2) to discuss potential information and education partners who can help the department meet the needs identified by the Task Force; and 3) to finalize the conclusions and recommendations in order to draft a report for discussion at the January 15, 2008, meeting.

### **NR700 Approach for Handling Lead Arsenate Contaminated Sites**

Bowman stated that she has received positive feedback on the proposed NR 700 approach. The memo included in the packet outlined some of the remaining areas of concern and the department's responses. The Task Force needs to address item No. 7 "[t]he cost to cleanup sites in Crawford County exceeds the value of the land and the ability of the people to pay". The memo presented three possible options: (1) Recommend the landowners clean up the site; (2) order the landowners to cleanup the sites; and (3) amend state statute to allow the ACCP fund to pay for a greater portion of the clean-up costs for hardship cases (must define hardship in rule or statute).

Clay asked if lead is going to be part of the MOU and part of the clean-ups? Bowman stated yes, but arsenic is the driving force for these sites and the scenarios reflect arsenic levels. The process would be the same for elevated lead or arsenic samples. If a site has lead, but arsenic isn't above background (and in roughly a 1:4 ratio to lead), it would be from a different source. DNR would handle it instead of DATCP, but the same NR 700 process is used.

Harrington feels the proposed MOU is critical. He asked if the property owners have to assign their insurance prior to submitting costs to the fund because there is an asset when clean-up exceeds the value of the property? In Brownfield area, went to AIG, allowed sites to be closed with potential for natural tenation, with the possibility that sites could be reopened. Harrington suggested the department consider a master insurance policy that would insure risk where the cost to clean up property exceeds the value of the property. Giesfeldt offered to discuss the Brownfield program with DATCP to see if this model would work.

Busch stated that 80% of the property owners in the Crawford County area would not be able to afford cleanup since lead and arsenic concentrations are high in the old part of the Gays Mills orchards. Based on NR700, Frank's Orchard site in Gays Mills, made up of 3-5 acre lots, would require cleanup and would qualify for ACCP Fund cost share. Busch asked what part of an old

orchard site needs to be cleaned up. Warzecha said the agencies have not made a determination regarding required cleanup specifications for residential and non-residential areas. The type of development will dictate the type of remedial action approach for the land. Warzecha suggested low-income families start with an initial investigation by collecting samples, especially at potential former mix-load sites. Based on the results, an assessment on the type of remedial action (remove or cap soil) would be required with a project manager deciding on the action.

Because DATCP currently deals more with commercial businesses, Bowman stated that the department would need a statutory change to allow for different rules for hardship cases. One consideration is what to do if hardship money is given and the property is later sold at profit -- could some of that state money be recovered? A defined hardship clause could be a recommendation for the final LATF report.

Stadelman said the department should consider hardship for owners of existing developed property but not for owners of undeveloped property. Harrington added that we need to differentiate the cost of cleanup for residential versus non-residential property.

Maenner asked what happens if someone is ordered to clean up and they don't? McCutcheon said that DNR has the authority to apply enforcement discretion related to site-specific numbers for any property, and there is a formal process to challenge DNR's decision. Bowman said DATCP has the ability to take action against someone who does not clean up, but based on current authority we do not have the ability to provide additional funding. She stated that the department has no plans to take enforcement action against property owners, but would advise them of their options. When DNR takes an enforcement action, it refers the case to the Wisconsin Department of Justice (DOJ) who assesses someone's ability to pay. By statute, DATCP works through county District Attorney's Offices instead of DOJ. DNR is considering a way to handle cases involving inability to pay, such as a deed affidavit process adding language about site contamination to the deed.

Krutza surveyed members on their feelings about a hardship program:

Stadelman – Yes to a hardship program.

Selk – Yes, but it would be very rare—provide cost share on ability to pay. We have enough discretion within DNR.

Busch – Yes.

Harrington – Yes, but need rules to define hardship and claims should be based on the current use of the property. Look at insurance instead of using the state fund.

Clay – Look at other state programs on how they define hardship—has to be something on ability to pay basis. Consider lien on property if sold and future profit made.

Lyon – Yes (could be a business as well).

Maenner – State should not be taking people's land. State should pay for cleanup of residential areas.

Phillips – Fee scales and cost share are commonly used—should have funding source available so that state can help.

Theine – Lien not a viable option because only defers the problem.

Brown – Agrees with right of property owner and need to look for ways to help.

Larson – Agrees that a lien defers the problem. Need to research health risk, look at different programs and state commit resources to help clean up sites. Would like to see property sites cleaned up.

Bowman said DATCP is looking for an overall recommendation as to the direction on this issue. We will go through an open process of statutory and rule changes with public hearings looking at hardship and insurance clauses.

Stadelman asked how future buyers can be protected? Selk pointed out that using a lien would address the money issue only. Stadelman said if a lien is used it is critical that the underlying lien holder be notified simultaneously with the property owner. Giesfeldt said DNR's deed affidavit considers the ability to pay as a key element. McCutcheon explained DNR's BRRTS system and GIS Soil Registry are means of notifying future property owners about sites. All sites that have some type of known release (open and closed) are in BRRTS. The GIS Soil Registry is for all sites where contaminated soil or groundwater is left in place. Stadelman supports the deed affidavit with notice to buyer, but Theine feels it could be more damaging because no known amount on it.

Clay questioned the requirement for a Toxicity Characteristics Leaching Protocol (TCLP) analysis when landfilling contaminated soil and asked the state to come up with a number where they would not expect a TCLP to be done. He stated that property owners could save money by not requiring this analysis. Bowman said most sites are not at levels requiring TCLP, but those numbers depend on each operation's waste disposal plan. DATCP will look into what other states do. Theine does not support landfilling of orchard soil and would like a different category of landfill for this material. Urben stated that DNR and DATCP could recommend sites not be required to conduct TCLP tests (below a certain level) but said that any landfill can still require a TCLP test as part of their plan of operation. At many landfills, contaminated soil is used as daily covers.

Clay asked where the state is in the process of determining background concentrations for arsenate. Lynch stated that the numbers are still preliminary. Clay would like to see a single background number for the state instead of regional background numbers so that the department delivers a consistent message to the public. Warzecha said levels over background trigger notification and awareness but not cleanup (until over 100 ppm).

Krutza asked each state agency for their opinion of the NR700 approach. Warzecha believes it takes advantage of flexibility based on individual sites/risk assessment. McCutcheon likes that the state can handle the issue under the current rule structure. Klein said that for sites <100 ppm we can explain the options to a property owner and let them make a decision on how to deal with it. Krutza then surveyed members if they can live with the state's recommendations:

Busch – Concerned about what will be required of property owners—if property owner accepts the risk could the state come back to fine them?

Larson – Is comfortable with NR 700. Property owners should have ultimate control of their own health but the health risk of others is a concern.

Selk – Even if property owner does not want to take action, there needs to be public oversight of the health risk and action taken.

Harrington – Likes NR 700 and Clay's suggestions and congratulated the agencies for agreeing on the approach.

Clay – Thanked the three agencies for their hard work and feels the NR 700 approach is good because it allows for flexibility and gives people choices.

Maenner – Likes that the property owner does not have to turn in a sample if they do not want to.

Phillips – Good product.

Theine – Feels it is incomplete because it is missing a number between background and where a potential health risk starts.

Brown – Complimented the three agencies for looking at existing flexibilities and finding ways to work through it.

#### Orchard Database Discussion

Bowman stated that DATCP created a database of historic Wisconsin orchards by using aerial photographs from the 1930s to the 1960s. The database was created because there is no readily accessible source of information to tell homeowners if their property potentially is contaminated. The Task Force previously made the following recommendations related to the orchard database:

1. Take steps to validate the location of old orchards to feel secure about the accuracy and appropriate use of the DATCP database;
2. Move from a photo-based database to a web-based GIS system;
3. Include appropriate disclaimers on the database; and
4. Notify existing property owners of the presence of the database, explain how the database may be used, and provide them an opportunity to have their property removed if the site is not contaminated or it can be shown that it was never an orchard.

Bowman stated that input is needed on how to improve and use the database.

Larson cautioned on stigmatizing properties because of their location. He said the database should be queried on a per-site basis instead of a grouping of dots on a map. He recommended using GIS instead of an aerial photograph. Lyon suggested looking at current maps to define properties because things have changed since the aerial photographs. He also said there needs to be a way for properties to come off the list when evidence shows no contamination or when human health is not at risk. Phillips said the department needs to validate the accuracy of our information as best it can before releasing it and to proceed with caution when notifying property owners.

Selk feels the focus should be on getting more accurate information as to where orchards are (delineate orchard boundaries) and then inform people on where to access the information. He suggested looking into USGS maps and Historical Society archives for additional information on locations. To validate the database correctly it may have to be done in phases, possibly by counties. He suggested possibly hiring graduate students to work on the orchard database. Harrington agreed that releasing reliable information is important and recommended using a portion of ACCP fund monies to help validate this information.

Selk suggested the following: (1) Put together a workgroup to identify sources of additional information on historical orchards, (2) once resources are determined look at counties with the largest concentration of orchards; (3) move to GIS (from photos); (4) through county publicity, notify property owners and provide a mechanism that property owners can use to correct information. Possibly do a pilot program emphasizing areas of greatest concern; and (5) provide additional information about public health threat and remedial measures.

Larson agreed with Selk's approach, but said that the department needs to notify the property owner directly with a disclaimer, if possible, for a right to challenge. Clay wants it made clear that the orchard database is not the same as the BRRTS system or GIS Soil Registry.

Maenner suggested that when telling people about arsenic to keep in perspective the level of health risk, that lead arsenate was used at old orchards, list other risk areas besides orchards, and that it is an ingestible risk.

Lyon expressed concern that if the web-based GIS orchard database is done piecemeal by county it may not get completed. He would like it released all at one time statewide.

Theine stated that if owners have to prove their property was not an orchard, they should be able to assess those costs back to the state.

Krutza recapped the discussion about finding old orchards and disclosing the information. He asked that a draft recommendation be prepared, and Selk volunteered to review it.

#### Discuss Information and Education (I&E) Needs:

Bowman stated that the three issues the department wants feedback on are: (1) What I&E messages do you feel strongly about us delivering?; (2) how would you prioritize our I&E activities and who are the most important audiences?; and (3) who specifically should we be working with to develop, review and disseminate information and education? A minimum of four major categories were identified for inclusion in I&E: Health Risks, Sampling, Worker Protection and Frequently Asked Questions (FAQs). Bowman asked 1) if the department has captured the messages and audiences and 2) what what should be I & E priorities?

Clay said homeowners are the audience for health risks and sampling. Maenner stressed the need to send samples to certified soil sampling labs and asked about the handling of sample results. She said that the department's top priorities should be homeowners and those who deal with children, such as schools, day care centers and health care providers. Maenner will notify current orchard owners. Phillips agrees that homeowners on old orchard sites and kids are top audiences. He feels physicians are at the bottom because homeowners would get information from the county health department or state before they would go to a physician. Larson also feels that groups who work with children and property owners of former orchards are primary audiences. Theine recommended adding consultants to the list, and Stadelman said to include other major industry sources so they do not get upset about being on the list.

Lyon said it is important to make sure we are talking about the number of actual acres (50,000) with some of these acres no longer relevant(e.g., those that have been paved). He reiterated the need to balance the message so that the department does not cause more concern than necessary.

Bowman said we will be working with groups such as orchardists, realtors, public health departments, and other representative associations. The Task Force added associations for appraisers, financial institutions, and homeowners/neighborhoods to the list of outreach partners.

Krutza summarized that members are in general agreement with the NR 700 regulatory approach (to be documented in an MOU), the need to develop a plan for identifying orchards and validating the database, and the I&E steps.

Lyon asked if the MOU to be created stays in effect until it is revised or does it expire if the current administration changes? Bowman answered that it does not expire.

Review and Finalize Preliminary Task Force Conclusions and Recommendations from January 24, 2007 Meeting:

Task Force members made the following statements regarding the preliminary conclusions and recommendations:

Larson – Subcommittee felt the current disclosure requirements are adequate and reminded the department that there is a Lead Arsenate Orchard Addendum that his association's members are encouraged to give to prospective buyers..

Lyon – Suggested changing recommendation No. 1 under disclosure to a positive statement.

Clay – Recommended changing “background” to “level of concern,” however, Bowman said “background” is the language used in NR 700. He asked if the MOU would be completed before going public? Bowman said the MOU will be a memorialization of what we can do within the existing NR 700 process. Bowman said DATCP can live with the recommendation that the MOU be in place before I&E information goes out.

Brown – Believes getting I&E information out is more important than completing the MOU. She feels good about the conclusions and recommendations presented, and the packet received today was helpful.

Maenner – Feels she has good information to give to the Apple Growers Association.

Clay – Very close to our goal—state specific background number is needed.

Selk – Have made progress with good materials provided to focus our discussion.

Lyon – Good, but members may have different views of final report.

Stadelman – Wonders about the timing of the MOU as a separate document and how it will all come together and tie in with I&E and the database?

Busch – Agrees with consensus.

Larson – Feels very good about progress made—useful information for property owners.

Chairman Krutza thanked members for their time and travel to attend today's meeting during this busy time of year and wished everyone Merry Christmas. Meeting adjourned at 1:30 p.m.

Respectfully submitted,

Kristina Gordon and Jennifer Heaton-Amrhein  
DATCP

**Approved: January 15, 2008**

## **DATCP Lead Arsenate Task Force**

January 15, 2008

Minutes

**Members Present:** Cindy Brown, Rick Busch, Dr. William Greaves, Art Harrington, Mike Krutza, Tom Larson, Jeff Lyon, Anna Maenner, Jeff Phillips, Bob Selk, Rick Stadelman and Norbert Theine.

**Staff and Others Present:** Jeff Ackerman, Lori Bowman, Mark Giesfeldt, Kris Gordon, Rick Graham, Jennifer Heaton-Amrhein, Duane Klein, Ed Lynch, Pat McCutcheon, Kathy Pielsticker and Bruce Rheineck.

**Members Absent:** Tim Clay, Robin Shepard and Matt Stohr.

Chairman Mike Krutza called the meeting to order at 9:06 a.m. and thanked and congratulated members of the Lead Arsenate Task Force (LATF) for coming together as citizens in open and respectful dialogue on a complex issue.

### **Review and Approval of the December 17, 2007 Meeting Minutes:**

The Task Force approved the minutes of the December 17, 2007 meeting by unanimous consent (Cindy Brown/Anna Maenner motion).

### **Review of the Goals for the Meeting:**

Bowman expressed her appreciation for everyone taking the time to review the draft Task Force Final Report distributed prior to the meeting, especially with so little time. She asked Task Force members to report any editorial changes after the meeting, and to concentrate on substantive changes during this meeting. After today's meeting, staff will revise the report and provide a final draft to Task Force members.

Bowman also discussed a handout distributed at the meeting giving two alternative approaches on how to memorialize their collaboration on NR700 regarding lead arsenate sites: (1) Addendum to existing DNR/DATCP MOU and (2) new MOU between the three agencies. The first and preferred alternative, which would require a letter of agreement from DHFS, can possibly be prepared in two to three months. The second alternative would involve creating a new MOU between the three agencies but pull as much information as possible from the current MOU. It could take up to six months to complete because more coordination is involved to brief respective agency heads and legal counsels. Agencies will work towards completing the MOU in the next few months.

### **Review, Discuss and Act on the Draft Task Force Report:**

Bowman stated that the Executive Summary in LATF's Final Report is longer than a typical executive summary, but that it will be used as a ready reference of the recommendations and work done by the Task Force. The LATF reviewed the draft report section by section.

Lyon suggested including language in the Executive Summary explaining that 50,000 acres of the total Wisconsin acreage was or still is orchards-- of which some has already been developed--so that people understand that we are talking about a minimal part of Wisconsin's total acreage. He also asked that on page 3, paragraph 1, clarify the "hundreds of schools" and list other places in addition to schools.

Theine asked whether our web-based geographic information system (GIS) for orchards of concern is part of the Wisconsin Land Information System (WLIS). The database is still a work in progress, but when complete the information will be made accessible to the WLIS. Selk suggested this be done by creating a link from one web site to the other. The lead arsenate GIS database will be managed by DATCP and will be made accessible to other systems, such as WLIS, if this is a Task Force recommendation. It was then recommended by the Task Force to link our lead arsenate GIS database on the WLIS and other publicly accessible sites.

Another suggestion for the report, when talking about human health risks under Health Implications, is to use more user friendly terms about how much someone would have to ingest on a daily basis, and this will be added. Lyon also recommended that length of time be added plus mention a few common sense risk mitigation practices. These practices will be described further in frequently asked questions and as part of information and education (I&E) materials.

Theine expressed concern about the use of top soil with the change in land use—managing waste on industrial sites. He was assured that sites are regulated based on whether they are being developed as industrial or non-industrial (commercial, residential) sites.

In the Human Health Risks section, Lyon wondered about the level of arsenic in drinking water and how it relates to our discussions on the levels in soil. Selk understands it to mean that because there are limited epidemiologic studies to identify lead arsenate in the soil, comparisons are made to water which is similar. Phillips suggests clarifying with regard to a health study that arsenic is arsenic whether investigated in soil or water.

In talking about NR700, the report outlines historical concerns in handling lead arsenate sites. Lyon suggested spelling out acronyms such as TCLP the first time they are used which will be done. Bowman also pointed out there is a list of acronyms on page iii of the report.

After some discussion on background levels, Theine recommended having some sort of range that is above background but would not be a case.

Bowman directed members to page 7 of the Final Report which lists the three issues discussed this fall: Interagency cooperation, orchard database and I&E. This led to a discussion of samples and reporting the results if they are between background and 100 ppm. Maenner pointed out that while owners are required to report results that are above background, many property owners would choose not to report. Most reported results under 100 ppm arsenic would not require a clean-up, while reported results over 100 ppm would likely require a more complete investigation and clean up. Theine suggested following up with a letter to the property owner that their site is clean or that the state is not concerned with contamination on their property.

Dr. Greaves feels education is important so people understand that arsenic in the soil is a risk only when there is some kind of activity creating exposure. Theine agrees that results over 100 ppm show contamination but disagrees that any results over background shows contamination.

In response to Krutza's request, Maenner repeated the NR700 regulatory approach for lead arsenate sites as listed in Appendix C of the report for the following scenarios: (1) Property owner has arsenic **less than background levels**; (2) property owner has arsenic and lead **above background levels** but doesn't want clean closure and gets placed on the GIS registry; (3) property owner has arsenic and lead **above background levels** and wants clean closure; and (4) property owner has arsenic **above 100 ppm** and lead **above 400 ppm**. Stadelman said the beauty of the final report is that the three agencies agree on the enforcement of NR700 and how to deal with the issue realistically and with flexibility. Larson wonders if results between

background and 100 ppm that do not constitute a major health risk or required to cleanup, are a material adverse fact that needs to be disclosed? Chairman Krutza surveyed members about whether they are comfortable with the Final Report and the responses were as follows:

Maenner—Is comfortable with it because at less than 100 ppm a property owner can decide not to report the sample results. She added that property owners will want to test to see their level.

Larson—Is comfortable with levels determined as health risk.

Harrington—Feels good that DATCP, DNR and DHFS reached agreement, and the state should look for more opportunities to open dialogue between agencies and creating MOUs similar to this one, especially in cases where there is an overlap of authority. He said the fact about finding common ground should be reflected somewhere in the Final Report.

Lyon—If people test and results are between background and 100 ppm does the lab have responsibility to report results above background? Harrington feels the duty to report is on the owner of the property. Maenner questioned the difference between Nos. 3 and 4, pages 44-45, regarding disclosure when cleanup is done. Klein answered that cleanup in No. 4 is only down to 100 ppm. Phillips added that if levels are at 100 or over 400 and there is a 4-1 ratio indicating lead arsenate we would report. Bowman will add a footnote to say if either arsenic or lead are at a high level and ratio not present it may be an issue of non-ag related contamination.

Krutza asked members for their perception of the Final Report—overall can they live with it and do they agree that it is practical, economical and protects citizens?

Greaves—Yes, can live with the report. Health risks depend on what is in the soil as well as how the land is used.

Larson—Needs fine tuning to find ways to better organize information, but on the whole is happy with the report.

Maenner—OK, likes the flexibility in letting people know how to protect themselves and providing an opportunity to test without having to report.

Selk—Can agree with the report but is a little disappointed about the disclosure requirements.

Phillips—Agrees with the report. He pointed out public health risk—generally set at 1 in one million and setting risk at 1 in 100,000 or 1 in 10,000 at the background. Continue to leave number at 5 ppm.

Busch—Feels we have come a long way to overcome property owner fears. Owners he has talked to want to lessen health risks. The big factor now is education.

Stadelman—Would support it, and as far as the I&E report, we need to include more data as it becomes available.

Lyon—As a member of an association that is affected by this issue, he is cautious about his position. Need to keep it viable as time changes things. The principles are fine and it meets the three priority objectives, but it needs fine tuning.

Harrington—Likes report and recommends special mention of the three agencies setting a precedent of working together.

Theine—Explained the following two occasions he had to test the report's theory: (1) He looked at purchasing a piece of property that was formerly a small orchard (12-20 trees) and asked the property owner if he tested for contamination. He sensed the owner would rather take a loss on the property than have it tested. (2) Theine met with an agent of a financial institution about a property in foreclosure which was also an old orchard. The agent showed concern about testing and possibly being stuck with the cleanup costs before being able to sell the property. Education is vital. Theine feels more flexibility is needed for results between background and 100 ppm. Because of this, he is not able to support the Final Report.

Brown—Feels it meets the three objectives the LATF is charged with and believes it is an ongoing report requiring interagency corroboration to include more information in the future. She recognized the interagency cooperation when things were not coming together and their taking the time to work through this major step. I&E is important and how it is handled (putting together the documents and disseminating them to the public) is key.

Bowman said the last section of the Final Report, pages 10-13, is important for defining recommendations. Any substantive changes to Findings and Recommendations need to be raised now. Four categories were identified: Regulatory framework, information and education, disclosure and the orchard database.

In the disclosure section, Lyon agrees with the recommendation but believes it would be clearer if broken into bulletin points. He questioned the words gray areas, which in the sentence refers to potential areas of liability. It was agreed to delete this sentence. Because industry pays into the ACCP Fund, concern was expressed about using these funds to pay cleanup costs and suggested looking at GPR funds instead. Selk also expressed concern about where the money will come from to pay for cleanup costs because the LATF has not discussed a source of funding.

Selk was then asked to share what he found out about other sources of information to help in accurately identifying historical orchards and provided a listing called "Directory of Map Resources." He talked to NHGS; the State Cartographer's Office, which has very good spatial information; and the State Historical Society's plat maps and Bordner survey, which looks at section lines in the state. The Steenbock Library has agricultural production archives for 1925-80. One of the follow-up tasks is to further explore and delineate these other sources of information to reach our goal of more accurately identifying the historical orchards. Bowman will work with Selk on this and information will be shared with LATF members. I&E will include information on other web-based sources.

Selk pointed out on page 52, Appendix G (sample disclosure statement), that the cautionary notes are based on cautions required by the existing EPA-funded project and if the database changes they also need to be changed. Bowman will clarify this as a comment in a footnote. Maenner had a question about disclosure and Harrington answered that Wisconsin does not have a cost recovery statute but have common law. However, the federal Superfund law allows for the ability to sue previous responsible parties, but a purchase agreement may change it. Uncertainty in this area may create problems.

Stadelman questioned use of the Voluntary Orchard Disclosure Form with regard to vacant and undeveloped land where the fact that it was a prior orchard is known, and Larson said the same orchard form is used.

### Discuss Timeline for Finalizing and Releasing the Report:

Bowman thanked members for their input, and if there are additional editorial changes to the Final Report, send them via e-mail or hard copy to Jenni Heaton-Amrhein by January 25. She plans to have it done in final by February 15. Lyon would like another chance to comment on the Final Report and would need only a week turn-around time. She will send a follow-up notification to Task Force members when the MOU is complete. Please let DATCP know if there are opportunities to present this information at association/organization meetings and will also work with the identified I&E partners to get information out. The Final Report will be presented at the May ATCP Board meeting.

Bowman thanked members for their participation and opinions on a challenging issue. She thanked staff from DNR, DHFS and DATCP for their help and Kathy Pielsticker for her support and support from the Secretary's Office.

Krutza asked members for their perspective on serving on the Lead Arsenate Task Force, and they provided the following comments:

Greaves—Enjoyable experience and it's nice to see state agencies working collegially. He believes the initial LATF discussions came together in a good report.

Larson—Appreciates the opportunity to serve, to provide input and to hear other people's perspectives.

Maenner—Good to be involved because of the direct impact to the 200 apple growers in the Wisconsin Apple Growers Association, good to hear everyone's perspective and is glad to have a regulatory outline to share with her association members.

Selk—The chair set a good tone by providing a democratic process where members could share their views and participate in the decision making. Another successful ingredient was that employees from the three agencies were well prepared to deal with issues presented at meetings and educate members. We could understand others' perspectives and try to accommodate everyone.

Phillips—Agrees that staff from the agencies did an excellent job of presenting background on the regulatory process and answer questions. There was a broad perspective among members, but we were able to meld ideas.

Busch—Appreciates the opportunity to meet everyone from different backgrounds, and he volunteered to show people the affected sites in Crawford County. He is happy to have been part of the process and with the outcome, and now need to get education to the right hot spots.

Stadelman—Expressed appreciation for being invited to be part of the LATF, for the limited number of meetings required and for completing a report. He learned a lot about the issue and thanked the staff for their work in the process.

Lyon—As part of the Farm Bureau, he offered thanks for being part of the LATF and a part of the discussions.

Harrington—Appreciates the invitation to participate and learned from people around the table. Feels good that things came together to provide good public policy.

Theine—Good to hear the discussions but believes the LATF has put a burden on many people, and proof will be where it goes from here. He suggests reconvening in two-three years to see the results.

Brown—Thank you to Chairman Krutza for the open, honest dialogue at the meetings, to the staff of the three agencies for working together and to Secretary Nilsestuen for choosing people to represent the different areas. This is an ongoing process and with DATCP's proactive group and the Secretary's vision for agriculture the state will move forward.

Chairman Krutza again thanked members for their service, Kathy Pielsticker for her leadership, and DATCP, DNR and DHFS staff for working together. He then entertained a round of applause for agency staff on the work they have done. He announced the Lead Arsenate Task Force was a democracy that came to serve and served well, work of which is complete as of today. The meeting adjourned at 11:17 a.m.

Respectfully submitted,

Kristina Gordon and Jennifer Heaton-Amrhein  
DATCP

**Approved: February 26, 2008**

# Appendix C: NR 700 Regulatory Approach for Lead Arsenate Sites

Presented at November 19, 2007 meeting

In each of the scenarios below the following items are the first steps that need to occur:

- Property owner reports soil sample results.
- DATCP will make a determination if enough sampling was done to determine if their site should become a case or not. If enough sampling was not done, we will recommend that the property owner collect more samples.
- Once enough samples have been collected and the site has been adequately characterized, we will then make the determination if their site should become a case.

## 1) Property owner has arsenic **less than background levels**.

- This site will not become a case.
- The property owner does not need to disclose the sample results at the time of property transfer.
- Overall approximate cost: \$100 (analytical costs).

## 2) Property owner has arsenic or lead **above background levels** but doesn't want clean closure and gets placed on the GIS registry.

- This site will become a case and it will be entered into BRRTS.
- We inform the property owner of the closeout options – clean closure or GIS soil registry. They choose the registry option and we make a determination on whether they have an adequate barrier over their site.
- A groundwater investigation is not required if contamination is limited to surface soil.
- They pay \$200 to DNR to include their site on the GIS soil registry and we close their case with a land use control requiring them to maintain the barrier.
- Property owner is required to disclose sample results at property transfer.
- Overall approximate cost: \$300-500 (DNR fee and analytical costs).

## 3) Property owner has arsenic or lead **above background levels** and wants clean closure.

- This site will become a case and it will be entered into BRRTS.
- We inform the property owner of the closeout options – clean closure or soil registry. They choose the clean closure option and may hire a consultant to oversee the clean up project.
- All contaminated soil is excavated and taken to a landfill or placed on an outlot within the property development. The consultant will collect confirmation samples to make sure the site has been adequately cleaned up.
- A groundwater investigation is not required if contamination is limited to surface soil.

- If the outlot is not part of the same parcel an approval may be necessary from WDNR or WDATCP for disposal of the contaminated soil.
- We give them a clean closure for the lot(s) that have been cleaned up. If contaminated soil is placed on an outlot, it will be covered with grass or alternative cover with approval. The developer will pay \$200 to DNR to include the outlot on the GIS soil registry and we close their case with a land use control to maintain the barrier on the outlot.
- Property owner is not required to disclose sample results at property transfer for the site(s) that are cleaned up.
- Overall approximate cost: \$2,000-\$15,000/lot (DNR fee and consultant, excavation, trucking, analytical and landfill costs)<sup>2</sup>.

**4) Property owner has arsenic *above 100 ppm* or lead *above 400 ppm* with *both present in a 4:1 PbAs ratio*.**

- This site will become a case and it will be entered into BRRTS.
- We will likely require the property owner to investigate and clean up the contaminated soil. We require them to hire a consultant to oversee the clean up project.
- All contaminated soil over 100 ppm is excavated and taken to a landfill. The consultant will collect confirmation samples to make sure the site has been adequately cleaned up.
- We may require a groundwater investigation.
- They pay \$200 to DNR to include their site on the DNR soil registry and we close their case with a land use control requiring them to maintain the barrier.
- Property owner is required to disclose sample results at property transfer.
- Overall approximate cost: \$10,000-\$30,000+ (consultant, excavation, trucking, analytical and landfill costs)<sup>2</sup>.
- The clean up costs are eligible for reimbursement under the Agricultural Chemical Cleanup Program (deductible of \$3,000 in most cases with 75% cost sharing of eligible corrective action costs).

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<sup>2</sup> The estimated range of costs for an arsenic clean-up is based on a 1/4 acre lot.

# **Appendix D: Task Force NR 700 Concerns and DATCP Responses**

*Task Force members discussed their concerns related to NR 700 Regulatory Flexibility at the November 19, 2007 meeting and discussed DATCP responses to those concerns at the December 17, 2007 meeting.*

## **1. Property Owners will not sample correctly.**

DATCP will provide extensive information and education (I & E) on sampling procedures similar to those produced by the State of Washington. The I & E materials will be available on our website as well as through county health departments, UWEX, planning and zoning offices, county land conservation departments and other appropriate places. We may create a short video of someone properly collecting samples that would be available on our website. Department staff will be available to provide telephone guidance to property owners.

## **2. The department is focusing on orchard properties, not other properties where lead arsenate may have been used.**

Orchards are the focus of the lead arsenate issue because:

- 1) the concentrations are expected to be higher at orchard properties because lead arsenate was applied to orchards at higher rates and more frequently than on other sites;
- 2) the orchards received lead arsenate applications each year because they stayed in orchards and could not utilize a crop rotation;
- 3) other crops where lead arsenate was used had more tilling so lead arsenate is not found at the same concentrations in the surface soils (where it poses a direct contact threat); and
- 4) orchards can be identified on old aerial photos.

## **3. The consensus approach (NR 700) could create disincentives to sample.**

We want to encourage property owners to be knowledgeable about what levels of arsenic and lead might exist on their property. To become knowledgeable, they need to collect samples to help in assessing what the next steps should be for their site. Depending upon the levels found in the soil, they may not have to report the results or may only need to take minimal steps to manage the soil on their property to reduce their health risks.

Some property owners may believe the requirements to report results over background and be listed on the BRRTS system are a disincentive to sample. The flexibility for handling sites within NR 700 that allow most property owners to take protective actions without hiring a consultant, close a case at minimal cost, and access ACCP funds when ordered to complete a cleanup should minimize the disincentives to both sample and report.

**4. Local governments may have more control than state government. The consensus NR 700 approach state agencies agree on may not satisfy local governments.**

Both state and local governments have responsibilities related to managing contaminated land and land uses. While DATCP is responsible for ensuring proper cleanups and the DNR has authority under the NR 500 series for any contaminated soil disposal issues, local governments have the responsibility to approve zoning changes and local development plans.

An example of how state and local governments share responsibility is the development of the Grand Orchard Estates subdivision in Evansville. The local zoning board required the developer to complete a Phase I and Phase II environmental assessment prior to approving the development of the subdivision and re-zoning the property. The developers completed the assessment and reported the sample results to DATCP and DNR. The state agencies worked with the developer to cleanup the property and close the case. The state-approved cleanup process involved a step where the developers required additional approval from the local zoning board to construct a “visual berm” on an outlot where the contaminated soil was placed.

**5. Not requiring property owners to notify neighbors of sample results is not protective of public health.**

DATCP cannot require property owners to inform neighboring property owners about possible soil contamination. When there are subdivided properties where one property owner reports a sample result that exceeds background, the department will work with the DHFS and county health departments to provide information to all nearby property owners within the development/former orchard so they can make informed decisions in assessing the risk on their property.

**6. The orchard database identifies properties that may not have been orchards and may not be contaminated. This unnecessarily stigmatizes and reduces the value of these properties.**

DATCP mapped out locations of possible old orchards across Wisconsin using aerial photographs from the 1930's to the 1960's. The information is in electronic format, but the comparison of old air photos with modern landmarks may present a challenge for some users. In the future, we envision the potential orchard locations being GIS-located so it will be easy to know what areas may be affected. The conversion from aerial photographs to GIS-ready information could take several years. DATCP is uncertain about whether it should wait until the information is in its final form before including the database on the department's website. This information already is publicly available if requested [Note: The Task Force addressed this concern in its recommendations].

**7. The cost to cleanup sites in Crawford County exceeds the value of the land and the ability of people to pay.**

Samples from the historic Frank's Orchard show concentrations of lead and arsenic over 400 ppm and 100 ppm, respectively. These levels are over the levels DHFS has indicated could pose an immediate health risk. DHFS notified residents of the risks shortly after the sampling, and instructed them to take preventive measures. Ideally, the properties would be cleaned up to background levels, but the size of the former

orchard makes that impractical. The costs to do the environmental work would surpass the market value of the property several times over.

Some options in dealing with this problem at this property and others like it include:

- A. Recommend the landowners clean up the sites. This will likely result in no action or limited action, due to limited finances, and will not mitigate the risks or allow for case closure. The sites will remain listed on BRRTS as open cases and most of the risk associated with the lead and arsenic will remain. At a minimum, we would encourage the landowners to maintain a good grass cover on their property and bring in clean soil for their gardens, etc.
- B. Order the landowners to cleanup the sites. This will result in the cases becoming eligible for ACCP funding. This could encourage some owners to do substantial cleanup work. However, the out-of-pocket costs may be close to the purchase price of the parcels. Only the financially well-off will be able to comply with the department's order and a number of individuals would be 'out of compliance' with a state administrative order.
- C. Amend state statute to allow the ACCP fund to pay for 100% of clean-up costs for hardship cases (must define hardship in rule or statute). Following statutory revision, order the landowners to cleanup the sites, and provide ACCP fund assistance as needed.

*[Note: The Task Force addressed these options in its recommendations].*

# Appendix E: Information and Education Approach

The Task Force recommends that the four specific information and education pieces cover, at a minimum, the following information:

## 1) Health Risks

- Information about the major sources of arsenic and lead
- Where contamination is most likely
- What the risks are
- Effective, affordable and practical steps property owners can take to reduce the likelihood of exposure to arsenic and lead in the soil.
- Where to get more information

## 2) Sampling

- Why a property owner might want to take soil samples for lead and arsenic
- How to collect a sample (including how many and where to send them)
- What to do with the sample results
- What will happen if I have contamination on my property?
- There could be a short video segment available on the website showing someone properly taking a sample
- Where to get assistance if needed

## 3) Worker Protection

- Information about sources of arsenic and lead
- Where contamination is most likely
- How to protect your workers
- Where to get more information

## 4) Frequently Asked Questions (FAQ)

- How did lead arsenate get on my soil?
- Should I be concerned?
- What should I do if I think I might live on a former orchard?
- What types of things can I do to protect myself and my kids?
- What will happen if I have contamination on my property?
- Where can I get more information and help?

## **Potential Audiences and Partner for Information & Education efforts**

- People and organizations that care for children
  - Daycare center and home daycare owners
  - Camps
  - Municipal Governments (parks)
  - Public school districts and private schools
  - Homeowners with children who live on old orchard sites
- Homeowners/Neighborhood Associations
- Owners of orchards and their associations
- Adults who frequently work in soil
  - Landscapers
  - Maintenance and ground professionals,
  - Construction and utility workers
  - Gardeners
  - Agricultural workers
- Real estate professionals and their associations
  - Realtors
  - Brokers
  - Financial Institutions
  - Title search companies
  - Home inspectors
  - Home builders
  - For-sale-by-owner websites
  - Real estate attorneys
  - Appraisers
  - Environmental Consultants
- Local Governments and their associations
  - Planning and zoning offices
  - Health departments
  - Land Conservation Departments
  - UW-Extension
- Health care providers and their associations

### **Possible I & E Formats:**

- Written brochures
- Website – written, database and possibly video
- “Hotline”
- Training / presentations
- Press releases
- Include as part of Master Gardener course

## **Appendix F: Voluntary Lead/Arsenic Pesticide Addendum**

A copy of the Wisconsin Realtors Association  
voluntary Lead/Arsenate Pesticide Addendum  
is located on the next page.

**LEAD/ARSENIC PESTICIDE ADDENDUM**

1 For Use Prior To Sale Or Lease Of Properties Potentially Affected by Lead or Arsenic Pesticides (e.g. pre-1960 Orchards)  
2 This Addendum is attached to and made part of the Offer to Purchase/Lease dated \_\_\_\_\_ made  
3 by the Buyer, \_\_\_\_\_ with respect to the Property at  
4 \_\_\_\_\_, Wisconsin (Property).

5 **PROPERTIES POTENTIALLY AFFECTED BY LEAD OR ARSENIC PESTICIDES:** Prior to 1960 this property may have  
6 been part of a fruit orchard and treated with pesticides containing lead and arsenic. Lead and arsenic based pesticides were  
7 used extensively to control agricultural pests in fruit from approximately 1900 until the 1960's. These compounds tend to bind  
8 tightly to the soil in the surface layer and do not breakdown. The lead and arsenic may still be present in the soil long after these  
9 compounds were applied. Residues of these pesticides found in soils may be at levels that pose a human health risk.

10 The primary concern is with human health impacts resulting from long-term ingestion of contaminated soil, particularly by  
11 children. These risks can be minimized by the following control measures.

- 12 • Keep good grass coverage; this acts as a barrier to human contact with the soil below.
- 13 • Cover any disturbed or excavated soil.
- 14 • Wash fruits and vegetables from your garden before eating. Uptake of these contaminants into the food is  
15 not as much of a concern as ingestion of the soil itself.
- 16 • Wash hands and face after contact with soil and before meals and snacks.
- 17 • Minimize children's exposure to contaminated dust by mopping floors and washing toys and pacifiers frequently.

18 **SELLER DISCLOSURES:** Seller discloses the following information: [Check as applicable]

	<b>YES</b>	<b>NO</b>
19 Seller has knowledge that the Property was used as an orchard prior to 1960.	<input type="checkbox"/>	<input type="checkbox"/>
20 Seller has knowledge that lead or arsenic-based pesticides were used on the Property.	<input type="checkbox"/>	<input type="checkbox"/>
21 Seller has knowledge of unsafe levels of lead or arsenic-based pesticide residues currently on the Property.	<input type="checkbox"/>	<input type="checkbox"/>

22 **THE SOIL EVALUATION CONTINGENCY IS A PART OF THIS ADDENDUM IF THE BOX PRECEDING THE CONTINGENCY IS  
23 MARKED, SUCH AS WITH AN "X". IT IS NOT PART OF THIS ADDENDUM IF THE BOX IS MARKED N/A OR LEFT BLANK.**

24  **SOIL EVALUATION CONTINGENCY:** This Offer is contingent upon Buyer obtaining a written report which identifies  
25 the lead and arsenic levels in the Property's soils within \_\_\_\_\_ days of acceptance of the offer. The report sampling and  
26 testing shall be done by a qualified independent expert. Buyer shall order the sampling, testing and report and be  
27 responsible for all costs.

28 This contingency shall be deemed satisfied unless Buyer delivers a report to the Seller and the listing broker (if  
29 Property is listed), showing concentrations of lead in the soil above 50 mg/kg or arsenic above 5 mg/kg, within five days  
30 of the earlier of: 1) Buyer's receipt of the reports or 2) the deadline for Buyer obtaining said report.

31 If the report shows the lead levels are between 50 and 400 mg/kg or the arsenic levels are between 5 and 100  
32 mg/kg, Seller shall (provide Buyer with a credit of \$ \_\_\_\_\_ at closing) ( \_\_\_\_\_  
33 \_\_\_\_\_ )

34 ) **STRIKE AND COMPLETE AS APPLICABLE** and this contingency shall be  
35 satisfied. Upon receipt of the credit at closing Buyer shall be solely responsible for installing a barrier over bare soils on  
36 the property and performing other necessary hazard reduction activities.

37 If the report shows the lead levels are at or above 400 mg/kg or the arsenic levels are at or above 100 mg/kg, (the  
38 Offer shall be null and void) ( \_\_\_\_\_ )  
39 ) **STRIKE AND COMPLETE AS APPLICABLE**

40 **Note: Landowners with soil contamination greater than 100 mg/kg arsenic or 400 mg/kg lead should contact the  
41 Department of Natural Resources (1-800-943-0003) regarding their reporting duties under Wis. Stats. section 292.11.  
42 For further information regarding reporting duties: <http://www.dnr.state.wi.us/org/aw/rr/spills/index.htm>**

43 **ADDITIONAL INFORMATION:** The costs of remediating a site will vary depending on the level and distribution of the  
44 contamination, the size and layout of the site and the remedy chosen. Additional information may be obtained by contacting  
45 the Department of Agriculture, Trade and Consumer Protection at 608/224-4500.

46 By initialing and dating below, each Party acknowledges that they have read and understood and acknowledge receipt of  
47 a copy of this Addendum. Seller's initials below shall not constitute the acceptance or other disposition of the Offer.

48 \_\_\_\_\_

49 **Buyer(s) Initials ▲**                      **Date ▲**                      **Seller(s) Initials ▲**                      **Date ▲**

Drafted by: Attorney Richard J. Staff, General Counsel, Wisconsin REALTORS® Association  
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No representation is made as to the legal validity of any provision or the adequacy of any provision in any specific transaction.

## **Appendix G: Orchard Database -- Sample Disclosure Statement**

*[Note: This is based on the existing database. As the database changes, this disclosure statement will be revised]*

The historical aerial photographs you will be viewing show sites that were interpreted as being orchards by DATCP staff. The interpretations are characterized as high confidence (red border) and lower confidence (yellow border), based on the interpreter's certainty. There are no guarantees on the accuracy of these interpretations. Aerial photograph interpretation has inherent uncertainties and most of the orchard interpretations have not been verified by a second party or by other methods. In addition, one set of photographs (from the 1930's to 1960's) was examined for each county and not all counties have complete aerial photograph coverage. Users of this aerial photograph interpretation data should obtain additional verification of historical land use(s).

The goal of the orchard mapping project was to identify locations that may have received applications of lead- and arsenic-based pesticides, which may linger in soil and present a health risk when the land use changes. Lead- and arsenic-based pesticides were used at many types of sites from around 1900 until the early 1960's. Orchards typically received more pesticide applications than other crops, and old orchard sites are likely to contain residual levels of lead and arsenic that present a manageable long-term health risk. While these pesticides were commonly used, an orchard use history does not mean that the site is known to be affected.

This mapping effort did not include the identification of pesticide mixing and loading sites, which may contain lead and arsenic concentrations that present an immediate health risk. Sampling and additional investigation are needed to characterize mixing and loading sites.

*[Note: The Task Force recommended that any disclosure statements also provide information on how to be removed from the database and provide links to information and education materials. The department has not yet written those statements and this sample disclosure statement does not include that information.]*

## References

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