Stark County Health Department

Clandestine Methamphetamine Laboratory

Guidance and Cleanup Manual

August 26, 2005

PURPOSE

This document is designed to give background on clandestine methamphetamine laboratories and establish policy for investigation and cleanup. Chemicals used during production, residues or byproducts of production, and the drug itself represent hazards to the public of Stark County, especially the future inhabitants of a former laboratory. Thus, under the authority granted to health districts in Chapter 3707 of the Ohio Revised Code, former laboratories and the surrounding premises shall be considered a public health hazard and shall be ordered abated. Due to the recency of this problem, the approaches to handling clean-up and clearance testing have been evolving throughout the country. This document will be updated in accordance with Best Management Practices and changing technology.

IMPORTANT NOTE TO EMPLOYEES

During the course of routine work at the Health Department, for example investigating solid waste complaints or making home visits, it is likely that a meth lab will eventually be encountered. When encountered, employees must leave the scene immediately and call 9-1-1. Law enforcement are first-responders to the site of a meth lab. Additional information on recognizing a meth lab and what to do when one is encountered is contained in this document.

Methamphetamine

(Amphetamine, dextroamphetamine, methamphetamine, and their various salts are collectively referred to as amphetamines. In fact, their chemical properties and actions are so similar that even experienced users have difficulty knowing which drug they have taken. Methamphetamine is the most commonly abused.)

Street terms for methamphetamine: Meth, poor man's cocaine, crystal meth, ice, glass, speed

What Does Methamphetamine Look Like?

- Typically meth is a white powder that easily dissolves in water.
- Another form of meth, in clear chunky crystals, called crystal meth, or ice.
- Meth can also be in the form of small, brightly colored tablets. The pills are often called by their Thai name, yaba.

What are the methods of usage?

- Injecting
- Snorting
- Smoking
- Oral ingestion

Who uses methamphetamine and amphetamines?

During 2000, 4% of the U.S. population reported trying methamphetamine at least once in their lifetime. Abuse is concentrated in the western, southwestern, and midwestern United States.

How do methamphetamine and amphetamines get to the United States?

Clandestine laboratories in California and Mexico are the primary sources of supply for methamphetamine available in the United States. Domestic labs that produce methamphetamine are dependent on supplies of the precursor chemical pseudoephedrine, which is sometimes diverted from legitimate sources. It is smuggled from Canada, and to a lesser extent from Mexico. Domestic independent laboratory operators, mostly in the western, southwestern, and midwestern United States, also produce and distribute methamphetamine but on a smaller scale. Yaba (meth in tablet form) is most often produced in Southeast Asia and sent by mail or courier to the United States.

How much do methamphetamine and amphetamines cost?

Prices for methamphetamine vary throughout different regions of the United States. At the distribution level, prices range from $3,500 per pound in parts of California and Texas to $21,000 per pound in southeastern and northeastern regions of the country. Retail prices range from $400 to $3,000 per ounce.

What are some consequences of methamphetamine and amphetamine use?

- Effects of usage include addiction, psychotic behavior, and brain damage .
- Withdrawal symptoms include depression, anxiety, fatigue, paranoia, aggression, and intense cravings.
- Chronic use can cause violent behavior, anxiety, confusion, insomnia, auditory hallucinations, mood disturbances, delusions, and paranoia.
- Damage to the brain cause by meth usage is similar to Alzheimer's disease, stroke, and epilepsy.

(Source: DEA WEBSITE)

Environmental Impacts of Methamphetamine

The process of making methamphetamine – in both large and small laboratories – involves at least one, and sometimes more than one, stage with a significant risk of explosion and/or fire. Some of the chemicals used to produce methamphetamine have independent toxicity; when combined, they can have serious toxic and explosive effects. Some of the common ingredients in methamphetamine are:

Starting fluid (ether)
Paint thinner
Freon
Acetone
Anhydrous ammonia
Iodine crystals
Red phosphorous
Brake cleaner (toluene)
Drain cleaner (sodium hydroxide)
Battery acid (sulfuric acid)
Reactive metals (sodium or lithium)
Cold tablets containing psuedoephedrine

Every pound of methamphetamine produced can yield up to five pounds in toxic waste . The cost of cleaning up methamphetamine labs has been dropped dramatically, due to improved technology and support from the Drug Enforcement Administration (DEA). DEA estimates that the average direct cost to clean up a lab several years ago was about $17,000, but is now $2,000 to $3,000 per lab. There are additional ancillary costs associated with meth lab cleanup, such as property damage, reduced property value, salaries and overtime for law enforcement and medical personnel, medical costs for suspects or innocent bystanders (including children) injured or poisoned from the lab, and criminal justice costs associated with arrest and prosecution. All told, these ancillary costs can cost taxpayers tenfold, or more, the direct cost of cleanup per incident.
(Source: DEA WEBSITE)

How do I recognize a meth lab?

Clues that may indicate illegal production or sales of drugs include the following:

1. Access denied to landlords, neighbors, and other visitors
2. "Cooks" have no visible means of support but make cash purchases and payments
3. Covering or blacking-out of windows Other security measures such as cameras or baby monitors outside of buildings
4. Unusual traffic and activities, such as excessive night traffic or purchases taking place
5. Burn pits, stained soil or dead vegetation indicating dumping of chemicals or waste
6. Waste in trash, pits or piles, such as:
    a. Packaging from over-the-counter ephedrine or pseudoephedrine cold, diet or allergy pills
    b. Empty containers from: antifreeze, white gas, ether, starting fluids, Freon, lye or drain openers, paint thinner, acetone, or alcohol
    c. Compressed gas cylinders, or camp stove (Coleman) fuel containers
    d. Packaging from epsom salts or rock salt
    e. Anhydrous ammonia tanks; propane tanks or coolers containing anhydrous ammonia (often stained with a bluish tint).
    f. Pyrex/glass/Corning containers, with dried chemical deposits remaining
    g. Bottles or containers connected with rubber hosing and duct tape
    h. Coolers, thermos bottles, or other cold storage containers
    i. Respiratory masks and filters or dust masks
    j. Funnels, hosing and clamps
    k. Coffee filters, pillow cases or bed sheets stained red (used to filter red phosphorous), or containing a white powdery residue
    l. Apartments or buildings that smell like chemicals, including sweet, bitter, ammonia or solvent smells.

(Source: www.health.state.mn.us , Minnesota Department of Health)

What to do if you encounter a Clandestine Methamphetamine Laboratory

An individual who believes he or she has discovered an illegal drug lab or the site of an abandoned lab should immediately notify local law enforcement (Dial 911) and should not enter the area of the suspected lab. Anyone who inadvertently enters a lab should back out immediately without disturbing the cooking process, chemicals or equipment.

DO NOT touch anything in the lab.
DO NOT turn on any electrical power switches or light switches.
DO NOT turn off any electrical power switches or light switches.
DO NOT eat or drink in or around a lab.
DO NOT open or move containers with chemicals or suspected chemicals.
DO NOT smoke anywhere near a lab.
DO NOT sniff any containers.
DO NOT remove anything from the lab.

DO leave the area
DO decontaminate yourself and your clothing.
DO wash your hands and face thoroughly.
DO call your local authorities or DEA district office.
(Source: DEA WEBSITE and www.health.state.mn.us , Minnesota Department of Health)

INVESTIGATION

Law enforcement are first-responders to the site of a meth lab, not the Health Department. However, subsequent to a raid, law enforcement shall notify the Health Department to ensure residual contaminants are followed up on. (Typically a DEA subcontractor removes the gross chemicals and labware.) Following notification by law enforcement, a site visit will be conducted by a health department official. Upon arriving, it should be determined if the scene ***has been*** secured by law enforcement and that the immediate threat has been minimized (i.e. gross chemicals removed, structure vented, etc.) Entry into a lab site must be cleared by law enforcement and appropriate PPE must be worn. As described below, the objectives of the preliminary assessment are to:
1) identify the process or processes used (e.g., anhydrous, red phosphorus, etc.) to manufacture the drug;
2) rule out the use of more toxic chemicals such as mercury or lead;
3) determine the scope of testing or remediation needed at a former clandestine lab site, and
4) judge and document whether habitable structures are safe for occupancy.

The preliminary assessment must be conducted by the Stark County Health Department. Steps in the assessment are to:

1. Identify the drugs manufactured; identify lab site chemicals and methods. Acquire information about chemicals removed from the site. This information may be available from:
   a. local law enforcement, narcotics taskforce, fire department or HazMat team who were active at the site and may have their own or other agency lists of chemicals removed;
   b. DEA contractor. DEA contractor will complete a manifest that lists categories (e.g., corrosives, solvents, etc) of chemicals removed and may also be able to provide packing lists with more specific information on chemicals and amounts removed.
   c. DEA EPIC (El Paso Information Center) Form. The EPIC Form can be accessed through the lead law enforcement agency at the clan lab site.
2. Interview HazMat team members, law enforcement personnel, to collect lab information, including:
   a. duration of lab operation and number of batches cooked or processed;
   b. drugs known to be manufactured;
   c. recipes and methods used;
   d. chemicals and equipment found;
   e. location of contaminated cooking and / or storage areas; visual assessment of the severity of contamination inside and outside of the structure where the lab was located;

f. assessment of contamination of adjacent rooms, units, apartments or structures;
g. disposal methods observed at or near the lab site (e.g., dumping, burning, burial, venting, and/or drain disposal).

3. Compare chemicals on the manifest or packing slip with known methods of manufacture in order to identify other potential contaminants and drugs other than methamphetamine.
4. Determine whether the drug manufacture method included the use of mercury, or lead. If these contaminants are found, cleanup protocols will deviate from the generic cleanup guidelines, and cleanup planning and remediation will be more stringent. Do not begin cleanup! Investigate guidelines for save clean-up and removal of these substances.
5. Determine appropriate cleanup methods for individual chemicals found at a specific location. Necessary cleanup activities could include:
   a. removal of unused, unopened chemicals from a storage area;
   b. testing and no further action;
   c. cleanup and final testing of cooking, storage or adjacent areas, with or without pre-testing;
   d. hazardous waste decontamination and final testing of an entire structure; or
   e. demolition, in cases of severe contamination.

CLEANUP

In determining the extent of clean-up, all the above factors must be weighed, along with potential exposure to future occupants of the structure. Cleanup contractors should work closely with the health department to coordinate a cleanup work-plan. The following websites contain basic information on cleanup. Enclosed in this document is copy of Missouri Department of Health cleanup guidelines, which is fairly user-friendly.

http://www.health.state.mn.us/divs/eh/meth/lab/cleanup0903.pdf

http://www.health.state.mn.us/divs/eh/meth/lab/labcleanup.html

http://www.health.state.mo.us/TopicsA-Z/MethLabCleanupGuidelines.pdf

During the preparation of this document several sources were contacted and state health departments' guidelines researched. In speaking with Steve Lee of the Minnesota Department of Health (615-297-8610), it was determined that recent testing and evaluation of policies has led their state to revised guidelines (not published at the time of this writing). The following are the basic recommendations for structural clean-up. The investigation should be used to determine whether a professional is required to cleanup the premise or if it can be done by the property owner. All cleanup activity, whether done by the owner or a contractor must be thoroughly documented. **In addition, it should be determined if the home must be condemned and placarded.**

1. Throw away as many porous furnishings as possible, especially low-value "soft pieces". High value furnishings must be washed twice.
2. Wash all surfaces twice with detergent and water. Paint walls/ceilings twice.
3. Remove all carpeting and padding. HEPA vacuum subfloor. Clean twice. Coat with

polyurethane if necessary.

4. If owner challenges recommendations, testing for methamphetamine can be conducted at the owner's expense. Ideal areas to test are: ceiling fan blades, tops of refrigerators, or other enamel / metal surface. Seek "high and hard" surfaces that are not frequently cleaned.
5. Clearance testing should be conducted with a PID. Use the PID to test volatiles using a 30 second or one minute average per room. Also, pay special attention to plumbing fixtures and stains.

In the case of a multifamily structure the meth lab site must be cleaned. Neighboring units must be tested for methamphetamine, and volatiles (using PID) at the owners expense. Use "high and hard" testing locations (see #4 above).

*[**NOTE**: Many states have a standard for clearance testing using methamphetamine as an indicator. If meth levels exceed approximately 1 microgram / squarefoot clearance is not granted. Minnesota testing has indicated that this is an unreliable method of clearance for the following reasons: the type of surface determines the level that can meth that can be removed onto a methanol soaked swab. For example raw wood, popcorn ceilings are poor substrates to test. Also, the standard does not have much research backing and is many times unreachable, especially when skewed by the substrate the contractor tests. This said though, it may be necessary at times to require clearance testing using meth as an indicator.]*

Additional concerns which must also be addressed are:

1. Plumbing drains which can accumulate volatiles in traps.
2. Septic systems and potential soil and/or groundwater contamination.
3. HVAC system: vent covers, filters, and duct work.

SEE ENCLOSED SAMPLE LETTERS FOR WRITING ORDERS.

LABORATORIES

At the time of this writing, only one laboratory was found that does wipe sample analysis for meth (done by the LCMS method). The cost as of August 26, 20005 was $100 per sample.

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