ARIZONA

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Arizona Department of Public Safety
WMD Haz-Mat Section

Officer Safety Information: New Guidelines For Indoor Grow Operations

Historically, indoor Marijuana-Mushroom grows have been "no big deal" to law enforcement as a HazMat or public health concern. However, due to recent Arizona events the Department of Public Safety would like to bring situational awareness to law enforcement (LE) and first responders regarding the hazards associated with responding to indoor marijuana grow locations. This information is provided for officer safety purposes.

Indoor Grow Operations and Health Effects to Responders
Surveys have shown that members of the LE community have suffered various illness and injuries associated with responding to indoor growing operations. Some common health effects are headaches, nausea, breathing difficulties, sinus congestion and irritation, and skin rashes. Some responders reported more serious illness requiring hospitalization.

The cause of the reported illnesses has been linked to the presence of toxic mold at these grow locations. Molds, including all mushrooms and yeast, are fungi which break down dead material and recycle nutrients in the environment. Mold can form spores, a reproductive structure that is adapted for dispersal and surviving for extended periods of time in unfavorable conditions. Research conducted by Network Environmental Systems (NES) of Folsom, California shows a major concern with toxic mold.

Various health problems have been associated with high levels of airborne toxic mold spores. When inhaled, mold spores may germinate; attaching to cells along the respiratory tract and causing further problems in those with weak immune systems.

Not all molds are toxic. For example, Penicillin is considered a non-toxic mold; however, it can cause health problems if one is allergic to it or receives a very high dose. Penicillin is usually injected or taken orally. It then gets into the blood stream and organs to kill bacteria.

Mold
Mold is everywhere and it is essential to the natural breakdown of organic material in the environment. There are literally hundreds of types of mold within the environment; they permeate in carpet glues, tile grout, food products, paper products, exposed wood products, ceiling tiles, and sheet rock. Conditions for the propagation of mold include and environment that provides warmth, moisture and fuel to feed the growing mold. Mold spores are extremely small and will spread until conditions are not favorable for growth. They will lay dormant until conditions stimulate growth.

Mold can grow and be visible in 24 to 48 hours if moisture is present. In indoor Marijuana grows mold is generally present in higher concentrations than under normal conditions. This is due to the amplified growing environment that fosters warmth, moisture, and food for the mold to proliferate.

Some molds can be lethal or cause health issues. Mold in its life-cycle produces spores. The mold and spores are on surfaces and spores become airborne. Indoor grows will have mold and spores present and if conditions are right, in high concentrations. You as a responder will be exposed to the spores these molds produce.

Infections
Another serious health threat from mold exposure is systemic fungal infection. Immunocompromised individuals exposed to high levels of mold, or individuals with chronic exposure paired with mycotoxin exposure may become infected with a systemic fungal infection. Mycotoxins are chemicals produced by an organism that kill other organisms. Some mold varieties produce mycotoxins, which kill other types of mold so it can colonize an area.

Mycotoxins can be present even after the mold is dried out. Systemic infection may be caused by environmental mold, or by other common food-related molds consumed under a weakened immune system. A weakened immune system may also give rise to opportunistic infections, such as a bacterial infection.

Sinus and digestive tract fungal infections are most common; lung and skin infections are also possible. Alcohol and mycotoxin production may result from the fungal growth, leading to myriad symptoms. Sudden food allergies and digestive problems can mislead diagnosis. Treatment can be long-term, taking several years to resolve.

Bacteria

One other factor is the presence of bacteria. This is a concern to responders in that conditions that promote mold growth also may promote bacterial growth. Bacteria may be on various surfaces that responders may handle. This again emphasizes the proper use of Personal Protective Equipment (PPE) including the appropriate respiratory protection [air purifying respirator (APR) or self contained breathing apparatus (SCBA)], protective clothing, protective footwear and latex or Nitrile gloves.

The Environmental Protection Agency requires use of PPE such as respiratory protection, coveralls, and gloves for remediation of household mold contamination.

New Guidelines for Indoor Marijuana and Mushroom Grow Operations In Arizona

Present Day Application

Research by the Royal Canadian Mounted Police and the National Counter Drug Training Center for Army National Guard, has led to newly adopted guidelines for indoor Marijuana grow operations. These principals and guidelines will apply to both indoor mushroom and marijuana grows, as the dangers associated with mold apply to both.

Response to indoor grow operations has been inconsistent in the past. The “It’s not a Clan Lab” mentality endangers Officer Safety. Some agencies, such as Arizona DPS and Maricopa County Sheriffs Office have adopted a new set of guidelines and policies and procedures to increase officer safety. These new guidelines encourage responders to “treat it as a clan lab”. It is the intention of the AZ DPS to bring to light these newly adopted guidelines.

Clan Lab principals should always apply when responding to an indoor marijuana or mushroom grow operation. These principles, or new guidelines, include:

- Assess the hazards,
- Control the hazards,
- Use proper PPE
- Use established policies and procedures.

Note: OSHA regulation standards may apply in some instances.

Guidelines to Consider When Responding to
Indoor Marijuana or Mushroom Grows Operations

Tactical operation: Is the suspect present and armed. Is there a danger of exposure?

SWAT operations should wear minimal gear consisting of: full face APR, Tyvek suit, booties, and gloves over their Nomex. Consideration should be given to use of SCBA and splash protection in the event indoor Marijuana grow and a clandestine drug laboratories are present.

Booby traps: Is the indoor grow protected, and how?

As above, EOD generally fall under SWAT operations and follow the minimum guidelines.

Confined space: Is the indoor grow in the basement, small room, or hidden underground storage area? Confined spaces include spaces that present special hazards to workers, including risks of toxic or asphyxiant gas accumulation, fires, falls, flooding, and entrapment may be classified as permit-required confined spaces depending on the nature and severity of the hazard. Confined space is defined as any space that:

- Has limited or restricted means of entry or exit
- Is large enough for a person to enter to perform tasks
- Is not designed or configured for continuous occupancy
- Is any covered space of depth more than 4 feet

Air quality: Is there insufficient Oxygen or too much Carbon Dioxide to sustain life?

Air quality must be determined and constantly monitored. Adjustments to respiratory protection may be down or up graded. DPS HazMat units can be called upon to conduct air monitoring in support of these operations

Mold: Is the moisture contributing to increased mold presence?

Consider the newly adopted guidelines and **follow the clandestine laboratory procedures.**

Pesticides, fungicides, and fertilizers: How much is present and what are the concentrations?

These additives come in liquids, solids, powders, and aerosols and may not be properly marked. Some are toxic, skin absorbed, inhalation hazards, possibly flammable, and may be incompatible with other chemicals.

Electrical: How is the power being used or supplied and is it up to code?

Is there a spider wed of extension cords. Is the power being stolen? Is there a potential for a spark or fire due to electrical overloading. What are the conditions of the circuits and lighting? Additionally, what are the fall and trip hazards?

PPE: What PPE will you use, will it protect your respiratory track or will you take anything home with you? Are you susceptible to mold spores?

Entry operations should wear minimal gear consisting of: full face APR w/CBRN filter, Tyvek suit, booties, and gloves. Depending on the circumstances SCBA, Splash protection may be required. Studies have shown some people can fight off spore infection. But it also shows some cannot. Which one are you? Don't gamble with your health, wear your PPE.

Decontamination: How will make yourself safe and not contaminate other areas?

Marijuana grow decontamination can be simple. Remove and minimize the threat. Dry decontamination can be done outside in the decontamination area. First, remove Tyvek suit by slowly rolling it down. Remove the booties and then outer gloves. Last of all remove APR and then secondary or inner gloves. Wash hands, face and exposed skin thoroughly.

- If circumstances do not allow proper PPE (i.e., a normal search warrant uncovers an indoor Marijuana-Mushroom grow) steps can be taken to minimized exposure
- Remove yourself from the hazard as soon as it is safe to do so
- If possible change clothes and shower
- Place possible contaminated clothes into a paper bag and seal until washing
- Wash clothes separately from non-contaminated items with color safe bleach
- **Do not use Chlorine bleach on Nomex**
- Spray Lysol on non washable surfaces like vehicle interiors, boots, and web gear
- Clean your weapons
- Pay attention to your health and any changes that occur after responding to an indoor grow operation.

Arizona's dry environment does not promote mold growth, except during Monsoon season. The abundant sunlight, dry air, and household cleaners like Lysol and bleach kill most molds. Responders must remember we will never get rid of mold but taking steps to clean up will reduce mold spread and will help minimize illness and injury.

For questions please contact the WMD Haz-Mat section of the ACTIC, Sgt. Ken Morris 602-644-5962 or Detective Jeff Nash, 602-644-5702.

Sources: NES, DEA Clan Lab Basic training materials, DEA Clan Lab Site Safety Officer Training materials, U.S. EPA. Guidelines for Remediating Building Materials with Mold Growth, and Wikipedia.org on line encyclopedia.