Methamphetamine Drug Lab
Analytical Report

EXECUTIVE SUMMARY

On June 1, 2005, Michael Corcoran of Environmental Management, Inc. conducted a methamphetamine drug lab assessment of 9800 Skyridge Drive in Arcadia, Oklahoma. As a precaution, the Safeguard Properties had requested that testing be conducted to determine the levels of drug lab related contamination present.

The intent of the survey was to determine whether there was methamphetamine-related contamination present in residence, although there is no identified cleanup clearance level specified by the State of Oklahoma. The state of Washington Dept. of Human Services recognizes an allowable level of methamphetamine contamination of less than .1 micrograms / 100 centimeter square (ug/cm^2) or 1 microgram / 1 foot square ($ug/ft.^2$). The survey included an evaluation of the residence for airborne volatile organic compounds, corrosive (acids and bases), and methamphetamine surface contamination. On the day of the survey, eleven discrete surface samples, one-discrete HVAC sample, and one background sample was collected from the interior of the residence. There was chemical staining on the carpets and other horizontal surfaces.

The results of the survey indicated that there was no corrosive surface contamination. There were no indications of airborne volatile organic compounds detected in the unit. The methamphetamine surface samples collected indicated levels of contamination, which exceed the recommended standards.

SITE OVERVIEW

The property consists of a single family ranch style home. It is located on a rural setting in Oklahoma City, OK. The property is served with well water and septic system.

On the day of the survey, the residence had various household items and debris. The surfaces of the dwelling appeared not to have been cleaned prior to the survey. The interior walls and ceilings of the unit are a all of sheetrock construction; the floors are a combination of carpet and ceramic tile flooring.

A visual inspection was conducted, which indicated chemical containers usually associated with drug lab related activities and other household hazardous waste materials.

Distinct odors, which are characteristically associated with illegal manufacturing of methamphetamine, were noted in the unit on the day of the survey. There was no drug lab-related paraphernalia observed in the unit or on the property. A walk-around survey of the property revealed a dark viscous stain in the soil next to the shed, which could indicate drug lab-related spills or dumping. A sample was taken from the area of concern and tested for volatiles per EPA 8260 by Gas Chromatography –Mass Spectrometry. The analytical showed no volatile substances detected.

CONCLUSION

Not all guidelines and threshold values set forth have been met. It is recommended that all absorbable materials be removed from the rooms (carpet, draperies, etc.) and that the residence be decontaminated. The attic space showed methamphetamine contaminated above the recommended levels. It is recommended that the insulation material be removed and the crawl space be decontaminated. After these recommendations have been met, the residence should be deemed clean and ready for continuous occupancy under or according to those standards.

Attached is the work plan with sample locations and results.

Environmental Management, Inc

Michael Corcoran

Michael Corcoran

Pre-Cleanup Sampling Plan

Material, Equipment and Techniques:

A chain of custody form will be submitted to the lab with the samples in order to maintain the integrity of the samples.

Wipe samples for methamphetamine on non-porous surfaces within the residence will be collected using Whatman 40 ashless fibrous filter paper, in addition to using Dionized water as the collection solvent. Collection samples will be taken from areas that are most likely to be contaminated by drug lab activities utilizing a 10cm x 10cm template for analysis. Any composite samples taken will consist of taking no more than four 100cm^2 surface samples, all taken from a similar area (i.e. from four walls within the same room or similar rooms). Collection procedures require that an 11 cm filter paper (Whatman 40) be wetted with DI water and handled with gloved hands, changing gloves between each sample collected. The sample will be collected by swiping (5 times vertically and then horizontally) the area inside the 10cm x10cm squares over the surface to be sampled. The filter paper is then placed into a glass jar with a Teflon lined lid, and then labeled and affixed with a custody seal for transport to the lab. A lab method blank will be included with the samples. The blank will be carried through the entire sample preparation and analysis process and treated as a sample to eliminate the possibility of cross contamination.

Air quality tests will be taken to determine the presence of organic vapors associated with solvents used in the production of methamphetamine, and will be conducted using a OVM/PID (Organic Vapor Monitor / Photoionization Detector). The OVM/PID will be used as a direct reading instrument to detect a broad spectrum of organic vapor air contaminants within the rooms and point sources (i.e. drains, stained areas, or areas suspected of high remaining concentrations of VOC's).

Corrosive testing will be conducted to determine the pH (acidity/alkalinity) of identified surface areas suspected of chemical contamination. The pH samples will be obtained using EM Science ColorpHast Indicator strips and DI water. Surface areas suspect of contamination (stains, residue, counters, sinks, etc.) will be tested by wetting with DI water and subsequently applying pH paper to the moistened surface.

A gray water sample will be obtained from the traps of the suspected contaminated rooms for VOC and pH analysis. The sample will be collected by using a drawtube method.

Analytical Laboratory:

The laboratory used for analysis of the test samples is Analytical Chemistry, Inc., of 4611 S. 134th Place, Suite 200, Tukwila, Washington 98168. Business phone number is (206) 622-8353, FAX (206) 622-4623, E-mail: AnChemInc@aol.com. Point of contact with the laboratory is Mia Sazon. Collected samples are shipped Next Day Air the same day as the collection occurs. Samples are shipped with cold packs to insure that the laboratory receives viable samples.

Cleanup/Decontamination Procedures

Personnel:

All personnel involved in the decontamination of the residence will be required to wear/use the following:

1. Disposable Tyvek coveralls, to be removed after work periods and disposed of with other debris.
2. Heavy leather gloves and steel toed boots for the removal of furniture, fixtures, debris, and sharps.
3. Rubber gloves and rubber boots during the decontamination wash period. Gloves will be discarded after use.
4. Safety glasses when not wearing respirator.
5. Full-faced respirators in enclosed areas where VOC vapors are existent or conditions warrant.
6. Emergency eye wash and decontamination wash water will be available as an equipment item.
7. A recovery magnet to be used for the removal/locating of sharps in items to be handled by workers.

Structures:

The **Property** will be decontaminated by using the following procedures:

1. All porous furniture, personal belongings and fixtures including, but not limited to carpets, padding, drapes, clothing, bedding, linens, children's toys, books, tables, dressers, electronics, etc. will be removed and disposed of.
2. Any remaining food items, dishes, pots/pans and utensils will be removed and disposed of.
3. All light fixtures, ceiling fans, smoke alarms will be removed for disposal.
4. The kitchen appliances, vent hoods, ventilation motors, exhaust grills, kitchen vent, bathroom vents and exhaust ducts will be removed for disposal.
5. The heating & air system and ventilation ductwork will be decontaminated using a negative air filtration system in addition to the ventilation diffusers in each room.
6. Ceilings and walls will be triple washed with a detergent/surfactant and rinsed with clear/clean rinse water. The application of the cleaning solution will be done with a garden sprayer, and the rinse water will be applied with a water pump/garden hose combination.
7. All remaining countertops, appliances and cabinets will be triple washed with detergent and rinsed with clear/clean rinse water in the same manner as above.
8. All hard furnishings, counters, kitchen and bathroom fixtures (sinks, tubs, showers, counters) will be triple washed and rinsed with clear/clean rinse water in the same manner as above.
9. All floors will be triple washed with detergent and rinsed with clear/clean rinse water.
10. All wash water and rinse water will be recovered with a commercial grade shop-vac, the reclaimed water will be taken to Environmental Management and placed into their bulk waste water.
11. The wash/rinse cleaning of the residence will start in the farthest reaches of the residence and will proceed in a backward fashion to the entry of the residence in order to eliminate the spread of contamination.
12. All wash/rinse water will be pH tested to verify that it is non-corrosive (pH 4-10) prior to disposal.
13. All insulation materials from the attic area will be vacuumed from the rafters and disposed of in an industrial landfill.
14. All debris will be removed from the exterior storage shed.

Demolition and removal:

Any stained areas such as drywall or cabinets that cannot be cleaned will be removed for disposal.

Items to be salvaged:

Any items to be salvaged will require analytical testing.

Specific issues:

There were ten rooms, the attic, and one HVAC unit sampled. Out of the eleven areas sampled, none of the rooms were under the recommended levels. The entire house will require decontamination using the triple wash & rinse method. A licensed duct cleaning service after the rooms are cleaned will clean the HVAC and its trunk lines. There were a variety of different chemicals throughout the residence that will need to be addressed for disposal.

Waste Disposal Plan

Waste Designation(s):

All household chemicals, paints, and oils will be taken to Environmental Management at 5200 NE Highway 33 in Guthrie, OK for consolidation and disposal.

Wash water that is generated during the decontamination process will be disposed of through Environmental Management's industrial water wastestream

The methamphetamine contaminated debris materials will be taken to Absolute Waste Solutions Landfill in Tecumseh, OK and disposed of as Non-hazardous methamphetamine contaminated solid waste.

Waste Security Plan:

Procedures used to secure waste when clean up contractor is off site. The waste materials will be loaded into a rolloff box and removed from the site daily. The rolloff box will be covered during transport.

Identification of Waste Disposal Facilities:

Hazardous Disposal:
TERIS
309 American Circle
El Dorado, AR 71730
(870) 864-3680

Non-Hazardous Disposal:
Absolute Waste Solutions
23591 Brooksville Road
Tecumseh, OK 74873
(405) 282-3317

Post cleanup sampling plan

Materials, Equipment and Techniques:

As indicated in the Pre-Sampling Plan a chain of custody form will be submitted to the lab with the samples in order to maintain the integrity of the samples.

A total of 12 samples and one blank sample were collected in the pre-cleanup, all of which consisted of one 100cm^2 surface areas (see Pre-Cleanup Sample Table). All areas tested exceeded the allowable limit of 1 ug/1ft^2 or .1 ug/100cm^2. Wipe samples for methamphetamine on non-porous surfaces within the residence will be collected in the same manner as in the Pre-Cleanup sample Plan, using Whatman 40 ashless fibrous filter paper, in addition to using DI water as the collection solvent. Collection samples will be taken from areas that are most likely to be contaminated by drug lab activities utilizing a 10cm x 10cm template for analysis. Any composite samples taken will consist of taking no more than four 100cm^2 surface samples, all taken from a similar area (i.e. from four walls within the same room). Collection procedures require that an 11 cm filter paper (Whatman 40) be wetted with DI water and handled with gloved hands, changing gloves between each sample collected. The sample will be collected by swiping (5 times vertically and then horizontally) the area inside the 10cm x10cm squares over the surface to be sampled. The filter paper is then placed into a glass jar with a Teflon lined lid, and then labeled and affixed with a custody seal for transport to the lab. A lab method blank will be included with the samples. The blank will be carried through the entire sample preparation and analysis process and treated as a sample to eliminate the possibility of cross contamination.

Air samples were originally collected from all room. There was no indication of airborne volitiles. Air quality tests will be collected in the same manner as in the Pre-Cleanup sample Plan to determine the presence of organic vapors associated with solvents used in the production of methamphetamine, and will be conducted using a OVM/PID (Organic Vapor Monitor / Photoionization Detector). The OVM/PID will be used as a direct reading instrument to detect a broad spectrum of organic vapor air contaminants within the rooms and point sources (i.e. drains, stained areas, or areas suspected of high remaining concentrations of VOC's).

The pH samples were obtained using EM Science ColorpHast Indicator strips and DI water. None of the areas tested indicated corrosive acidic or basic (alkaline) level of contamination. Corrosive testing will be collected in the same manner as in the Pre-Cleanup Sample Plan conducted to determine the pH (acidity/alkalinity) of identified surface areas suspected of chemical contamination. The pH samples will be obtained using EM Science ColorpHast Indicator strips and DI water. Surface areas suspect of contamination (stains, residue, counters, sinks, etc.) will be tested by wetting with DI water and subsequently applying pH paper to the moistened surface.

A gray water sample was obtained from drain line trap on the suspected unit. The sample was obtained using a draw tube. The contents did not pH.

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