



FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.

**Preliminary Assessment
of an
Identified Illegal Drug Laboratory
10745 W. Dartmouth Avenue
Lakewood, Colorado**

Prepared for:

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EXECUTIVE SUMMARY

Based on available documentation,¹ on October 5, 2007, a local Industrial Hygiene consulting firm performed cursory wipe sampling for the presence of methamphetamine at the townhome located at 10745 W. Dartmouth Avenue, Lakewood, Colorado, 80227 (the subject property). The data quality objectives employed by the consultant are not known, and the history of the sampling is similarly not known.

The analysis conclusively confirmed the presence of methamphetamine at the residence, and indicated the contamination may have been marginal although possibly widespread.

At the request of the registered property owner, (Nokes), pursuant to CRS §25-18.5-101, and Colorado Regulation 6 CCR 1013-4², on October 30, 2007, Forensic Applications Consulting Technologies (FACTs) was contracted to perform a mandatory Preliminary Assessment at the subject property. The results of the Preliminary Assessment indicate widespread, but moderate to low concentrations of methamphetamine present throughout the entire subject property. A recommended remediation scope of work is found in the RECOMMENDATIONS section of this document.

In Colorado, there is no *de minimis* concentrations of methamphetamine below which a property can be declared “not of regulatory concern.” In the context of suspected controlled substance use, storage, processing or possession, any concentration of methamphetamine in a property is sufficient to subsequently identify the property as an “illegal drug lab”³ and trigger the regulatory requirement of a “Preliminary Assessment.” In strict adherence to State statutes and State regulations, FACTs has determined the following:

- An illegal drug lab, as that term is defined in CRS §25-18.5-101, existed at the subject property at the time of our assessment.
- A Class 1 Public Nuisance, as defined in CRS §16-13-303(1) existed at the subject property at the time of our assessment.
- The presence of methamphetamine was confirmed at the subject property at the time of our assessment.

¹ Gobbell Hays Partners, Inc. “Methamphetamine Wipe Sample Log” (bearing no date), GHP Project Number 07502.58

² The Colorado State Board Of Health Regulations Pertaining to the Cleanup of Methamphetamine Laboratories, 6-CCR 1014-3 (§4)

³ CRS §25-18.5-101



REGULATORY REQUIREMENTS

County

Governing Body

The Jefferson County Department of Health and Environment, Environmental Health Services Division is the “Governing Body” for this subject property as defined in CRS §25-18.5-101. The Governing Body has established binding county regulations for Jefferson County that became effective September 1, 2006.

State Requirements

According to Colorado State Regulation 6-CCR 1014-3, following the discovery of an illegal drug lab, as that term is defined in CRS §25-18.5-101, and following “notification,” a “Preliminary Assessment” must be conducted at that property to characterize extant contamination (if any), and to direct appropriate decontamination procedures (if any).

Pursuant to CRS §25-18.5-105, the subject property was deemed a “public health nuisance.” Pursuant to CRS §16-13-303, the subject property and all of its contents was deemed a Class 1 Public Nuisance. As such, the subject property must be remediated according to State Board of Health regulations 6-CCR-1014-3 or demolished (CRS §25-18.5-103).

Federal Requirements

All work associated with this Preliminary Assessment was performed in a manner consistent with regulations promulgated by the Federal Occupational Safety and Health Administration (OSHA).

PRELIMINARY ASSESSMENT

The Preliminary Assessment must be conducted according to specified requirements⁴ by an authorized Industrial Hygienist as that term is defined in CRS §24-30-1402. This document, and all associated appendices and photographs, is the “Preliminary Assessment” pursuant to those regulations. Included with this discussion is a read-only digital disc. The disc contains mandatory information and photographs required by State regulation for a Preliminary Assessment. This Preliminary Assessment is not complete without the digital disc and all associated support documents. Pursuant to State regulations, information obtained in the Preliminary Assessment enter the public domain and are not subject to confidentiality.⁵

⁴ Section 4 of 6 CCR 1014-3

⁵ Section 8.26 of 6 CCR 1014-3



Discovery and Notification

For this subject property, “discovery” and “notification” occurred when the registered property owner received the results of the cursory sampling by the initial Industrial Hygiene consultant.⁶

Preliminary Hypothesis

During the Preliminary Assessment, the hypothesis is made that the subject area is clean and data will be collected to find support for this hypothesis. Any reliable data that disproves the hypothesis, including police records, visual clues of illegal production, cursory sampling by knowledgeable consultants, storage, or use, or documentation of drug paraphernalia being present, is considered conclusive, and compels the Industrial Hygienist to accept the null hypothesis and declare the area non-compliant.⁷ The strength of evidence needed to reject the hypothesis is low, and is only that which would lead a reasonable person, trained in aspects of meth laboratories, to conclude the *presence* of methamphetamine, and/or its precursors or waste products as related to processing.

Sampling is not required during a Preliminary Assessment; however, if sampling is performed, it is conducted in the areas with the highest probability of containing the highest possible concentrations of contaminants. According to the State regulations:⁸

Identification and documentation of areas of contamination. This identification may be based on visual observation, law enforcement reports, proximity to chemical storage areas, waste disposal areas, or cooking areas, or based on professional judgment of the consultant; or the consultant may determine that assessment sampling is necessary to verify the presence or absence of contamination.

If the Industrial Hygienist performing the assessment finds *evidence* of contamination, the subject property owner is required to either remediate the subject property or demolish the subject property.⁹

In this case, the sampling performed by FACTs during the Preliminary Assessment was conducted in such a manner that if the data permitted, a Decision Statement, releasing the property, would have been issued. However, the resulting data did not warrant the issuance of a Decision Statement, and remediation will be required.

Initial Statement on Hypothesis Testing

Regarding this subject property, information existed from the previous Industrial Hygiene consultant that confidently challenged the hypothesis. Specifically, two of the wipe samples collected by the initial Industrial Hygiene firm were conclusive for

⁶ Gobbell Hays Partners, Inc. “Methamphetamine Wipe Sample Log” (bearing no date), GHP Project Number 07502.58

⁷ This language and emphasis is verbatim from Appendix A (mandatory) of 6 CCR 1014-3

⁸ Section 4.6 of 6 CCR 1014-3

⁹ Colorado Revised Statutes §25-18.5-103



methamphetamine. The quantitative sampling performed by FACTs also confirmed the presence of methamphetamine at the residence.

The totality of the circumstances challenged the hypothesis that contamination was absent from all portions of the subject property. Based on the totality of circumstances, including objective sampling, we were not able to support the initial hypothesis and, therefore, we accept the null hypothesis and declare the residence and its contents as non-compliant.

Elements of the Preliminary Assessment

Specific mandatory information must be presented as part of the complete documentation. This discussion, in its totality, contains the mandatory information for a Preliminary Assessment as follows:

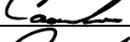
Form	DOCUMENT	Included
ML1- App. A	FACTs Property description field form	
ML2- App. A	Plumbing inspection field form and identification of ISDS	
ML2- App. A	Ventilation inspection	NA
ML3- App. A	FACTs Functional space inventory field form	
ML4- App. A	FACTs Law Enforcement documentation field form	
ML5- App. A	FACTs Field Observations field forms	
ML6- App. A	FACTs Contamination migration field form	
ML7- App. A	FACTs ISDS field form	
CD	FACTs Pre-remediation photographs	
ML8- App. A	FACTs Pre-remediation photograph log sheet field form	
Report	FACTs Drawing of Cook area(s) field form	
Report	FACTs Drawing of Storage area(s) field form	
Report	FACTs Drawing of Waste area(s) field form	
Report	FACTs Drawing General site field form	
Report	FACTs description sampling procedures, handling, and QA/QC	
Report	FACTs health and safety procedures used in accordance with OSHA	
Report	FACTs Analytical Laboratory Documentation Form	
ML14- App. A	FACTs Certification of procedures	
ML15- App. A	FACTs SOQs	
Appendix B	FACTs Analytical Laboratory Reports	
NA	Available Law Enforcement documents	NA
ML18- App. A	FACTs Field Data Sheets	
CD	A description of the analytical methods used and laboratory QA/QC requirements.	

Table 1
Inventory of Mandatory Information



Primary Structure

The primary residential structure was a three story, single family dwelling built *circa* 1984, approximating 2,002 square feet. The structure was primarily heated by a gas fired forced air system. A decorative (but ostensibly functional) fireplace was located in the living room on the main floor.

The structure appeared to have a concrete footer foundation upon which a floating slab served as the basement floor. The structure was on city sewer and city water.

A general layout of the structure in relationship to the local roads is depicted below.



Figure 1
General Site Overview

Review of Law Enforcement Documentation

As part of the Preliminary Assessment, FACTs is required by regulation¹⁰ to review available law enforcement documents pertinent to a subject property. During this project, the Lakewood Police Department exhibited the highest level of professionalism and

¹⁰ 6 CCR 1014-3 (Section 4.2)



cooperated with the requirements of our Preliminary Assessment. A review of available documentation and interviews with police personnel with firsthand knowledge of the address, did not reveal information pertinent to our assessment.

Visual Inspection of the Property

As part of our Preliminary Assessment, on October 30, 2007 FACTs performed a visual inspection of the subject property. Pursuant to regulatory requirements, the subject property was assigned into “functional spaces,” and an indicia inventory and assessment was performed for each functional space.

The property was essentially in an “unoccupied” state at the time of our assessment. The property was essentially devoid of all chattels; major appliances remained.

To protect the property owner against the introduction of contaminants into the subject property, the FACTs Industrial Hygienist and his Technician donned fresh Tyvek[®] suits and booties upon entering the property. All equipment brought into the subject property was staged at the front door of the structure. The ladder used by FACTs during our assessment had been cleaned at a car wash prior to use.

Sample Collection

Although State regulation does not require samples to be collected during a Preliminary Assessment, due to the available information and cursory sampling results, we collected samples from the subject property in an effort to better characterize the possible extent of contamination. We collected two types of samples: 1) wipe samples, and 2) vacuum samples.

Selected wipe samples and vacuum samples were submitted for analysis to Analytical Chemistry Inc. in Tukwila, Washington; a laboratory listed in the Colorado regulations.

Wipe Samples

Wipe samples were collected in a manner consistent with State regulations. The wipe sample medium was individually wrapped commercially available Johnson & Johnson[™] gauze pads. Each gauze material was assigned a lot number for quality assurance and quality control (QA/QC) purposes and recorded on a log of results. Each pad was moistened with reagent grade methyl alcohol. Each batch of alcohol was assigned a lot number for QA/QC purposes and recorded on a log of results.

Each proposed sample area was delineated with a measured outline.

Each wipe sample was collected by methodically wiping the entire surface of the selected area with moderate pressure; first in one direction and then in the opposite direction, folding the gauze to reveal fresh material as necessary. Each sample was returned to its centrifuge tube and capped with a screw-cap.



QA/QC Precautions

The sampling media were prepared in small batches in a clean environment (FACTs Corporate Offices). The sample media were inserted into individually identified disposable plastic centrifuge tubes with caps.

Field Blanks

For QA/QC purposes, a field blank was randomly selected from the batch, randomly inserted in the sampling sequence and submitted along with the samples for methamphetamine analysis. To ensure the integrity of the blank, FACTs personnel were unaware, until the actual time of sampling, which specific sample would be submitted as a blank. To ensure the integrity of the blanks, laboratory personnel were not informed which specific sample was a blank. The history of the FACTs field blank media has demonstrated a media and solvent contamination level below the analytical detection limit for the method.

Cross Contamination

Prior to the collection of each specific sample area, the Industrial Hygienist donned fresh surgical gloves, to protect against the possibility of cross contamination.

Vacuum Sample

The vacuum sample was collected in accordance with standard industrial hygiene microvacuum sampling procedures.¹¹ After an area had been selected and measured, a commercially available 25 mm diameter extended-cowel cassette fitted with mixed cellulose ester (MCE) membrane was attached to a commercially available personal sampling industrial hygiene pump. The pump was adjusted to draw approximately four liters of air per minute with a back pressure of approximately two inches of water column. The cassette was opened to present an “open face,” and the selected area was vacuumed with the cassette. Prior to the collection of the sample, the Industrial Hygienist donned fresh surgical gloves, to protect against the possibility of cross contamination. The cassettes were sealed and secured with a strip of duct tape for shipping to the laboratory.

Collection Rationale

The samples that were collected throughout the subject property comprised of “discreet” samples. Discreet samples are collected at single isolated locations. In the following table, the Decision Threshold is that value below which the sample result would need to be if the samples were final verification samples.

¹¹ For example, see ASTM Method D 5756-02



Sample Results

Type	Sample ID	Location	µg/100cm ²
Wipe	DM103007-1	Kitchen top of refrigerator	0.01
Vacuum	DM103007-2	Living room Carpet	<0.001
Wipe	DM103007-3	Attached outside shed W Wall	0.02
Wipe	DM103007-4	Furnace return base of stairs	0.03
Wipe	DM103007-5	S Bedroom Top Shelf in Closet	<0.01
Wipe	DM103007-6	Attic Shelving	0.04
Wipe	DM103007-7	Upstairs Bathroom Corner over sink	<0.01
Wipe	DM103007-8	Upstairs Master Bedroom N Wall	<0.01
Wipe	DM103007-9	Basement Bathroom top of Shelf by Shower	0.45
Wipe	DM103007-10	Basement Utility Room Top of Duct	1.20

Table 2
Summary of Sample Results

Additionally, the previous Industrial Hygiene firm that performed the cursory sampling, conclusively identified methamphetamine on the Second Floor in the master bedroom (1.2 µg/100cm²), and on the First Floor in the kitchen (0.83 µg/100cm²).

Overall, the samples indicate widespread but moderate to low contamination throughout the entire residential structure.

Sample Result Thresholds

It is a common misconception that concentrations below the value misinterpreted as the State's regulatory threshold value (0.5 µg/100m²) necessarily indicate that the area is not contaminated. However, the regulatory threshold values are exclusively to be used as *prima facie* evidence during final verification activities in the absence of all other information. During a Preliminary Assessment, there is no *de minimis* concentration of methamphetamine below which a statement of compliance can be made in the absence of any other information.

The regulations state:

Pre-decontamination sampling

In pre-decontamination sampling, the question that is being asked is "Is there evidence of the presence of methamphetamine production in this area?" The assumption (hypothesis) is that the area is clean i.e. "compliant," and data will be collected to find support for the hypothesis. Data (such as samples) are collected to "prove" the area is compliant. Sampling, if it is performed, is conducted in the areas potentially containing the highest possible concentrations of contaminants. Any data that disproves the hypothesis, including police records, visual clues of production, storage, or use or documentation of drug paraphernalia being present, is considered conclusive, and leads the consultant to accept the null hypothesis and declare the area non-compliant. The strength of evidence



needed to reject the hypothesis is low, and is only that which would lead a reasonable person, trained in aspects of methamphetamine laboratories, to conclude the presence of methamphetamine, its precursors as related to processing, or waste products.

Decision Statement

If, *based on the totality of the circumstances*, the consultant finds that insufficient evidence exists to support the hypothesis that any given area is non-compliant, that area shall be deemed to be compliant with section 25-18.5-103 (2), C.R.S., and shall be released. If objective sampling data indicates contamination is less than the cleanup level, that data may be used as *prima facie* evidence that insufficient evidence exists to support the hypothesis that any given area is non-compliant.

The totality of evidence, including the sample results for this property, conclusively demonstrate the *presence* of methamphetamine throughout the residence, and in the attached shed.

However, based on the same information, the degree of decontamination may be commensurate with the type of functional space and the concentration of methamphetamine contained therein. Thus, although the functional spaces downstairs will require complete decontamination and attention to detail, the shed, attic and upper floors will merely require a thorough wipe-down.

Quality Assurance/Quality Control

The following section is required by regulation and is not intended to be understood by the casual reader. All abbreviations are standard laboratory use.

Primary Data Set

MDL was 0.004 µg; LOQ was 0.03 µg; MBX <MDL; LCS 0.1 µg (RPD 1%, recovery =99%); Matrix spike 0.020 µg (RPD 5%; recovery 105%); Matrix spike Dup 0.020 µg; (RPD 5%; recovery 105%); Surrogate recovery (all samples): High 114% (Sample 10), Low 85% (Sample 8); FACTs reagents: MeOH lot #A0703 <MDL for n=4; Gauze lot G0702 <MDL for n=11 and >MDL for n=1 (0.04µg).

The QA/QC indicate the data met the data quality objectives; and the results appear to be biased slightly high (that is, the samples may contain less methamphetamine than reported by the laboratory).

Sample Locations

In the figures that follow, the sample locations have been presented. The drawings are stylized and not to scale.



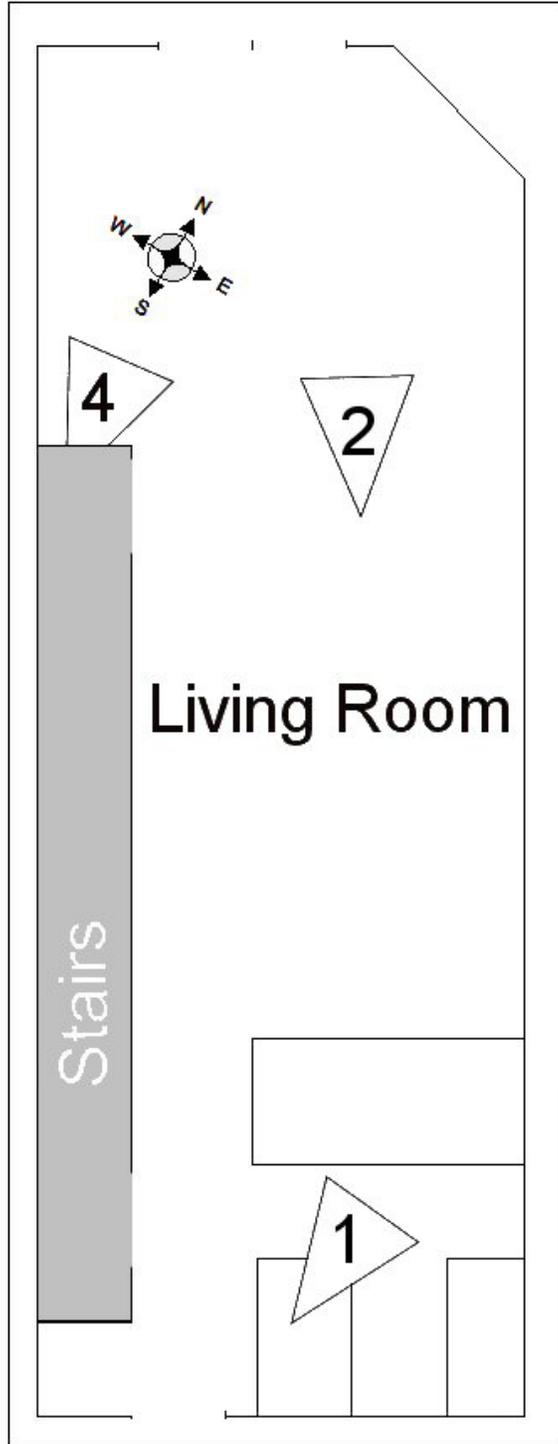


Figure 2
Sample Locations Main Floor - Not to Scale



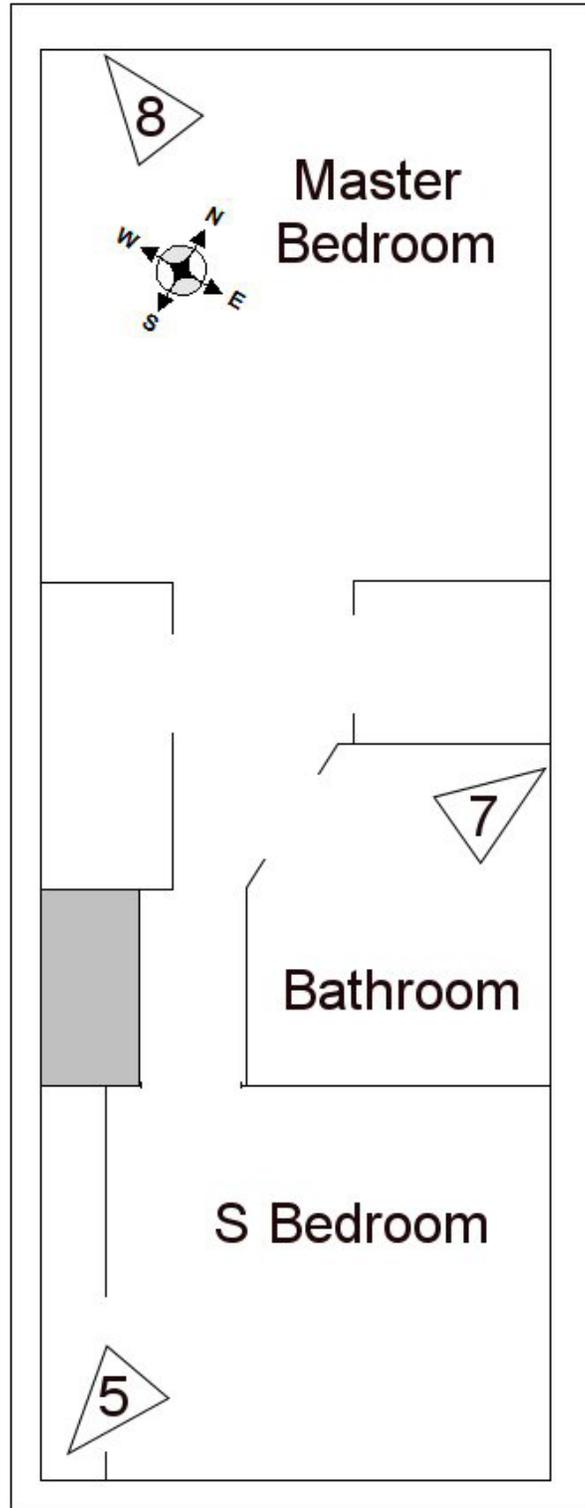


Figure 3
Sample Locations Upstairs- Not to Scale



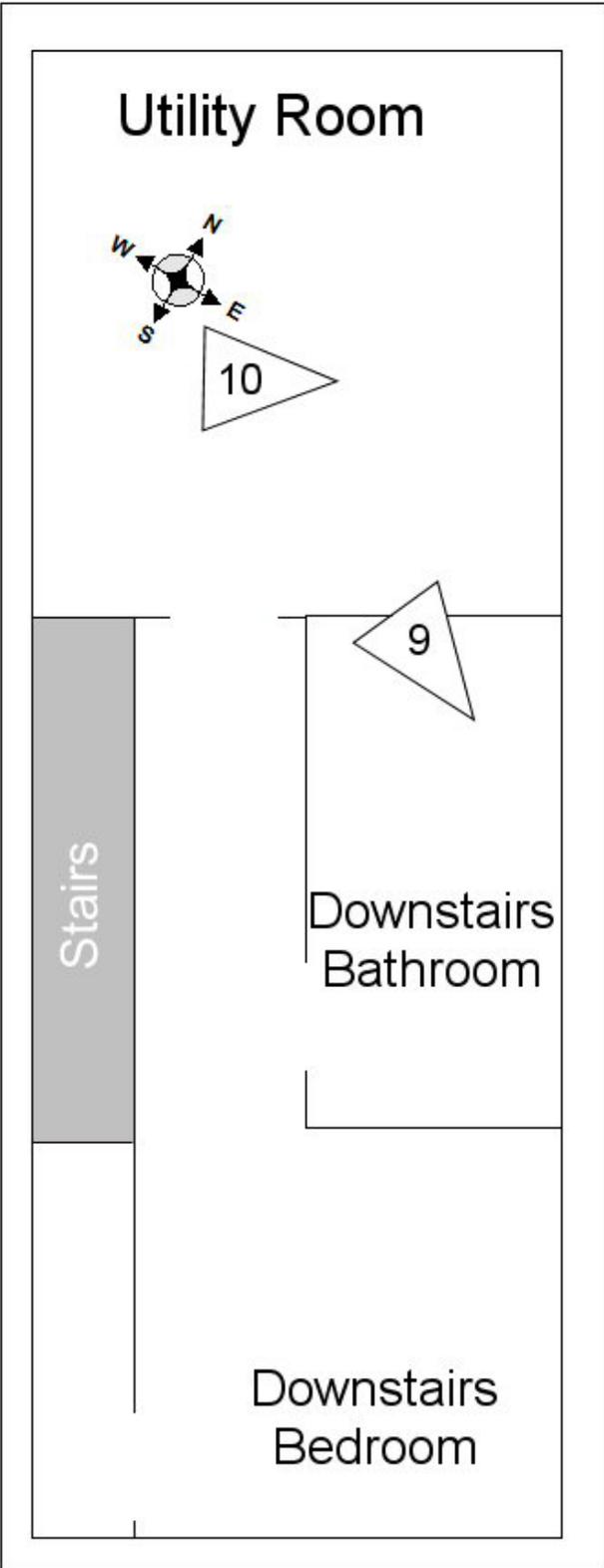


Figure 4
Sample Locations Basement - Not to Scale



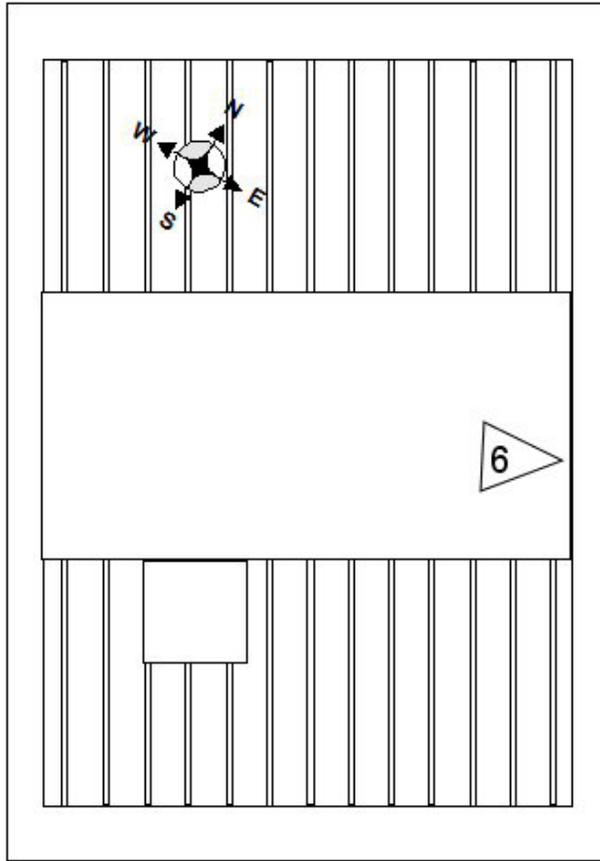


Figure 5
Sample Location in Attic - Not to Scale

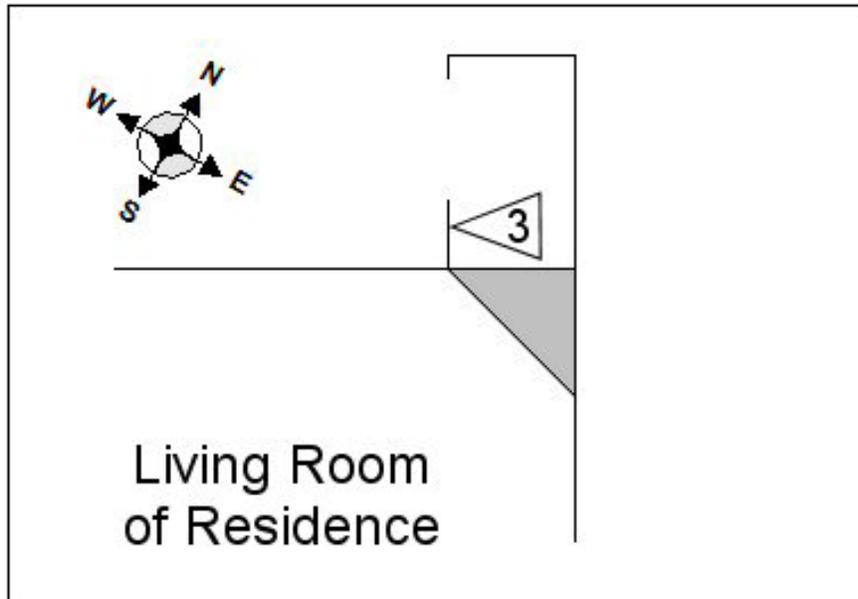


Figure 6
Sample Location in Shed - Not to Scale



Identification of Cook/Storage Areas

Based on the best information available, we believe that no manufacturing took place at the property. However, based on our sampling results, and the sample results from the previous industrial hygiene firm, use and/or storage of methamphetamine may have occurred throughout the entire residence.

FUNCTIONAL SPACE SUMMARY

During a Preliminary Assessment, the Industrial Hygienist divides an area into “functional spaces” and evaluates the potential for contamination in each area. The idea is to segment a property into specific areas which may present different potentials for contamination, based on the anticipated use, or function, conducted in that area. Thus, functions of bedrooms and bathrooms may be different, kitchens and living rooms may be different, etc. Pursuant to regulations, a building is divided into such areas based solely on subjective professional judgment with foundational guidance in Federal Regulation.¹²

For evaluation purposes, the following Functional Spaces have been identified and are addressed below:

Structure	Functional Space	Description of Functional Space
1	1	Foyer and Kitchen (tiled areas)
1	2	Living room and stairs (up and down stair cases)
1	3	Attached outdoor shed
1	4	Upstairs south bedroom
1	5	Attic
1	6	Upstairs bathroom
1	7	Upstairs master bedroom, closets and hallway
1	8	Basement bedroom with bath and closets
1	9	Basement utility room

Table 3
Functional Space Summary

Functional Space 1: Entry Foyer and Kitchen

This space was defined as those terms are commonly known. The area is delineated and confined by the portions of tiled floor. The kitchen was open to the living room/dining room (all carpeted areas). A sample collected by the previous industrial hygiene firm was positive for methamphetamine; our discreet sample collected from the top of the refrigerator also contained methamphetamine, but at a concentration of less than 1% of the previous sample. The disparity between the two samples is not uncommon, and speaks to the issue of expected error known as “sampling error.”

¹² Asbestos Containing Materials in Schools; Final Rule and Notice, Title 40 CFR Part 763, Fed. Reg. Vol. 52, No. 210, Fri. Oct. 30, 1987



Functional Space 2: Living Room and Stairs

This space was contiguous with the kitchen and would have contained a dining area. The entire functional space is carpeted. A discrete sample was collected from the carpet roughly in the center of the room. Additionally, from this space, a discreet wipe sample was collected from the interior of the furnace return. Whilst the carpet sample did not contain methamphetamine in concentrations greater than the method detection limit, the sample from the furnace conclusively contained methamphetamine.

Although not a functional space *per se*, the sample collected from the interior of the ventilation system indicated that contamination in that system was notable, albeit low. The industrial hygiene and medical communities now know that the mere use of methamphetamine in a home results in elevated exposures to the occupants via airborne migration. When methamphetamine is smoked, between 80%¹³ and half¹⁴ of the substance is released from the user's pipe. Of that material which is inhaled, between 33%¹⁵ and 10%¹⁶ of the nominal dose is not absorbed into the body (leaving the remainder airborne). Recent work conducted by Industrial Hygienists at the National Jewish Hospital¹⁷ in Denver, Colorado, indicate that a single use of methamphetamine, by smoking, would result in an average residential area ambient airborne concentration of methamphetamine ranging from 35 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) to over 130 $\mu\text{g}/\text{m}^3$. These authors found that smoking methamphetamine just once in the residence can result in surfaces being contaminated with methamphetamine. The authors concluded: *"If methamphetamine has been smoked in a residence, it is likely that children present in that structure will be exposed to airborne methamphetamine during the 'smoke' and to surface methamphetamine after the 'smoke.'*"¹⁸

¹³ Cook CE, Pyrolytic Characteristics, Pharmacokinetics, and Bioavailability of Smoked Heroin, Cocaine, Phencyclidine, and Methamphetamine (From: Methamphetamine Abuse: Epidemiologic Issues and Implications Research Monograph 115, 1991, U.S. Department Of Health And Human Services Public Health Service Alcohol, Drug Abuse, and Mental Health Administration National Institute on Drug Abuse)

¹⁴ Cook CE, Jeffcoat AR, Hill JM, et al. Pharmacokinetics of Methamphetamine Self-Administered to Human Subjects by Smoking S-(+)-Methamphetamine Hydrochloride. Drug Metabolism and Disposition Vol. 21 No 4, 1993 as referenced by Martyny JW, Arbuckle SL, McCammon CS, Erb N, Methamphetamine Contamination on Environmental Surfaces Caused by Simulated Smoking of Methamphetamine (The publication of this study is currently pending. Copies of the study are available from the Colorado Alliance for Drug Endangered Children.)

¹⁵ Harris DS, Boxenbaum H, Everhart ET, Sequeira G, et al, The bioavailability of intranasal and smoked methamphetamine, Pharmacokinetics and Drug Disposition, 2003;74:475-486.)

¹⁶ Cook CE, Jeffcoat AR, Hill JM, Pugh DE, et al Pharmacokinetics of methamphetamine self-administered to human subjects by smoking S-(+)-methamphetamine hydrochloride Drug Metabolism and Disposition, Vol 21, No. 4, pp. 717-723, 07/01/1993

¹⁷ Martyny JW, Arbuckle SL, McCammon CS, Erb N, Methamphetamine Contamination on Environmental Surfaces Caused by Simulated Smoking of Methamphetamine (The publication of this study is currently pending. Copies of the study are available from the Colorado Alliance for Drug Endangered Children.)

¹⁸ Martyny JW, Arbuckle SL, McCammon CS, Erb N, Methamphetamine Contamination on Environmental Surfaces Caused by Simulated Smoking of Methamphetamine (The publication of this study is currently pending. Copies of the study are available from the Colorado Alliance for Drug Endangered Children.)



Since it is the purpose of the ventilation system to move air throughout the structure, and the furnace (as evidenced by the ductwork sample) conclusively contained methamphetamine, we conclude the furnace may be a continued source of contamination unless appropriately addressed. The results of the furnace sample alone would lead a reasonable person, trained in aspects of meth laboratories, to conclude the *presence* of widespread methamphetamine throughout the entire occupied space, all other sample results notwithstanding.

Therefore, we conclude that, based on this sample, an high probability of at least trace concentrations of methamphetamine exists at the residence, even in areas that have not been confirmed as contaminated by sampling.

Functional Space 3: Attached Outdoor Shed

This functional space was delineated by the walls containing the small room. The small shed contained some debris, but was otherwise empty.

The single discreet sample collected from this area conclusively contained methamphetamine.

Functional Space 4: Upstairs South Bedroom

This space was defined as the term is commonly used. One discreet sample was collected from this space; in the closet on a shelf. Although the sample did not contain methamphetamine, the otherwise widespread nature of methamphetamine in the residence does not necessarily preclude its presence in the room.

Functional Space 5: Attic

Based on our observations, the attic had been used for storage and other activities. The attic walls had been cored into the adjoining units on both sides. The purpose of coring the walls is unknown but there was no apparent legitimate reason, and the purpose may have been nefarious in nature.

One discrete sample was collected from the shelving in the attic; the sample conclusively contained methamphetamine.

Functional Space 6: Upstairs Bathroom

This space was defined as the term is commonly used. One discreet sample was collected from this space; from the wall by the lights. The sample did not contain methamphetamine at a concentration above the detection limit.

Functional Space 7: Upstairs Master Bedroom, Closets and Hall

This space included the two closets and the small hallway leading from the stairs. Although our discreet sample did not contain methamphetamine at a concentration



greater than the detection limit, the sample collected by the initial industrial hygiene firm did conclusively contain methamphetamine.

The combined sample results support the argument that the deposition of methamphetamine is both moderate, widespread and unpredictable.

Functional Space 8: Basement Bedroom and Bathroom

The basement is roughly divided into three areas: 1) Bedroom, 2) Bathroom and 3) Utility Room. The bathroom is intrinsic to the bedroom, and therefore, we combined the two for one functional space.

One discrete sample was collected from the top of the shelving by the shower. The sample conclusively contained methamphetamine.

Functional Space 9: Basement Utility Room

The utility room contained the furnace, and laundry appliances. The top of the ducts contained historical dust and the sample collected at that location contained methamphetamine and may represent the best value for the peak average concentration of deposition in the residence.

Exterior grounds

Although not truly a functional space *per se*, the exterior grounds were assessed independently. We did not have any information that implicated the exterior grounds as being possibly contaminated. Furthermore, we did not observe any visual clues of activity (such as stressed vegetation). Therefore, based on the totality of the circumstances, testing of the exterior grounds was not only deemed unnecessary but was deemed unreasonable.

Adjoining Properties

No common areas such as common hallways, elevators, or laundry rooms were present at the subject property. FACTs did not have legal authority to investigate fugitive emissions of methamphetamine beyond the confines of the subject property.

CONCLUSIONS

Based on the totality of the circumstances, including our objective sampling, and the objective sampling of the initial industrial hygiene consultants, insufficient evidence to support the preliminary hypothesis and we accept the null hypothesis and conclude that widespread methamphetamine presence exists throughout the residential structure of the subject property.

RECOMMENDATIONS

Based on our observations and laboratory results, we recommend standard industry practices for decontamination be followed. The remediation contractor should be given



full responsibility for their own standard operating procedures. The following are provided as guidance and reflect standard practices for the remediation of similar properties. The Governing Body has statutory authority to require a greater degree of decontamination.

Overall, the presence of methamphetamine in this unoccupied residence is low to moderate, and common sense would indicate that the decontamination should be relatively straightforward. Based on the information at hand, the most appropriate degree of decontamination for this property would be a thorough wipe-down. Due to the unpredictable nature of the deposition of methamphetamine in the property, and the possibility of contamination migration, all areas should be wiped down in a systematic fashion, not just those wherein methamphetamine was identified at elevated concentrations.

1. A licensed contractor who is trained and experienced in methlab decontamination, as required by State regulations, should be contracted for the decontamination work. All work performed at the residence should be conducted by an experienced contractor whose employees are documented to have been properly trained in accordance with 29 CFR §1910.120 and Colorado Revised Statute §25-18.5-104; *Entry into illegal drug laboratories*.
2. We recommend the decontamination process be conducted in Level C PPE ensembles with a minimum of half-face APRs. We recommend that a decontamination corridor with showers be established at the backdoor for access into the primary residence.
3. All remediation work performed at the residence should be conducted under written contract with a reputable remediation company qualified to perform the work.
4. All work performed at the residence should be conducted with open communication and cooperation with the Jefferson County Department of Health, the Lakewood Police Department, and in accordance with all other State regulations.
5. All remediation work should be presumed to be pursuant to Title 29 of the Code of Federal Regulations, §1910.120 until otherwise indicated.
6. Work should proceed from a “top-down” fashion; wherein negative pressure is established in the structure by placing a negative air machine in the downstairs bedroom and venting the negative air machine out the south window of the downstairs bedroom. Work should begin in the attic, and progress from the attic to the upstairs rooms, then to the main floor and then the utility room. The downstairs bedroom area should be last.



7. All surfaces in the attic that are accessible from the standing platform should be HEPA vacuumed and wiped down. The insulation can remain in place.
8. All other surfaces in the residence should be thoroughly wiped down including all walls, shelves, closet interiors, ceiling fans, interior and exterior of kitchen cabinets, interior and exterior of kitchen appliances, interior of the shed, tops of all exposed ducts in the utility room, all surfaces in the bathrooms, cubby hole in downstairs bedroom, and any and all other surfaces not specifically mentioned.
9. Following the wipe down, all carpeting can either be removed, or steamed cleaned in a normal fashion. We believe that the carpeting can easily be salvaged, and decontaminated. If the carpet is allowed to remain, it must be sampled in each room, during the final clearance sampling, *independent of all other required sampling*.
10. After all surfaces have been wiped down and the carpets have been cleaned or discarded, the interior of the ducts and the furnace should be commercially cleaned, while maintaining the entire furnace system interior *negative* to the residence (that is air flow must always be from the outdoors to the inside of the residence, and from the inside of the residence to the interior of the ductwork and furnace).
11. The contractor *should* be contractually obligated to perform personnel air monitoring for methamphetamine for at least one full shift employee per day to allow for support of proper PPE selection.
12. The contractor *should* be contractually obligated to include the personnel air monitoring data in their final documentation.
13. Any contractors (and their subcontractors) should be contractually obligated, through a written contract, to decontaminate the subject property to below the statutory limits. Any recleaning required by a contractor (or their subcontractor) pursuant to a failed final assessment should be contractually obligated to be performed at the expense of the contractor.
14. Contractors should be contractually obligated to cover industrial hygiene costs of return visits and sample expenses as a result of failed final clearance(s).
15. State regulations prohibits painting or otherwise encapsulating surfaces prior to final clearance sampling by the Industrial Hygienist.
16. Following the decontamination process, and prior to the final clearance sampling by the Industrial Hygienist, the remediation contractor/subcontractor should be contractually obligated to collect a minimum of three QA/QC wipe samples from the subject property, as part of their own QA program, and submit those samples for methamphetamine analysis. The contractor should be contractually obligated to provide their wipe sampling data (including location of sample, area of sample,



and analysis results), to the consulting Industrial Hygienist for review prior to final clearance sampling.

17. If the contractor's three QA/QC samples suggest that contamination in the subject property remains at a concentration in excess of $0.1 \mu\text{g}/100 \text{ cm}^2$, the contractor should be contractually obligated to continue to clean, and resample, until the elevated concentrations are not observed.
18. Once the contractor's samples indicate the contamination has been sufficiently reduced, the Industrial Hygienist should perform final clearance sampling according to 6-CCR 1014-3.

Enclosures: One digital disc; Data package, and Appendices



APPENDIX A:

SUPPORTING DOCUMENTS

Form	DOCUMENT
ML1	FACTs Property description field form
ML2	Plumbing inspection field form (plumbing system integrity and identification of sewage disposal mechanism)
ML2	Ventilation inspection
ML3	FACTs Functional space inventory field form
ML4	FACTs Law Enforcement documentation field form
ML5	FACTs Field observations field forms
ML6	FACTs Contamination migration field form
ML7	FACTs ISDS field form
ML8	FACTs Pre-remediation photograph log sheet field form
ML14	FACTs Certification of procedures, results, and variations from standard practices. (Signature page)
ML15	FACTs SOQs
ML 17	FACTs Field Data Sheets



**FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.
CLANDESTINE METHAMPHETAMINE LABORATORY
ASSESSMENT FIELD FORMS[©]**

FACTs project name:	Dartmouth	Form # ML1
Date: October 30, 2007		
Reporting IH:	Caoimhin P. Connell, Forensic IH	

PROPERTY DESCRIPTION:

Physical address	10745 W DARTMOUTH AVE LAKEWOOD CO 80227 5610		
Legal description or VIN	Neighborhood: 3919 - Pheasant Creek at The Bear/Victoria Village, Subdivision Name: 596400 - Filing #1; Block 2, Lot 22, Section 33, Township 4, Range 69, Quarter Section SE		
Registered Property Owner	Britt D Nokes Margaret E Nokes		
Number of structures	One		
Type of Structures (Each affected structure will need a "Functional Space" inventory)	1: Residence	2,002	Square feet
	2:		Square feet
	3:		Square feet
	4:		Square feet
	5:		Square feet
	6:		Square feet
Adjacent and/ or surrounding properties	1: North – Sloping grounds to road		
	2: South – Parking lot		
	3: East – Attached private residence		
	4: West – Attached private residence		
	5:		
	6:		
General Property Observations	The subject property was virtually devoid of all chattels. The appearance of the property indicated good maintenance.		
Presumed Production Method	Smoking and possession only		

PLUMBING INSPECTION AND INVENTORY

FACTs project name:	Dartmouth	Form # ML2
Date:	October 30, 2007	
Reporting IH:	Caoimhin P. Connell, Forensic IH	

Functional Space	Room	Fixture	Indicia?	Comments
6	Bathroom # 1	Bath	No	
6	Bathroom # 1	Shower	No	
6	Bathroom # 1	Sink	No	
6	Bathroom # 1	Toilet	No	
8	Bathroom # 2	Bath	NA	
8	Bathroom # 2	Shower	No	
8	Bathroom # 2	Sink	No	
8	Bathroom # 2	Toilet	No	
1	Kitchen	Sink	No	
9	Utility Room	Slop sink	No	
9	Utility Room	Washing machine	No	
1	Kitchen	Dishwasher	No	

VENTILATION INSPECTION AND INVENTORY

Item	Y/N	Indicia ?	Sampled ?	Comments
Isolated AHU?	Y	Y	Y	
Common air intake?	N			
Common bathroom exhausts?	N			
Forced air system?	Y			
Steam heat?	N			
Common ducts to other properties?	N			
Passive plena to other properties?	*			None observed – ceiling was not penetrated for observation
Active returns to other properties?	N			
Passive wall grilles to other properties?	N			
Industrial ventilation?	N			
Residential ventilation?	Y			
Pressurized structure?	N			

The nature of the structure is studded drywall interior rooms resulting in hollow wall cavities. Therefore, communication of fugitive emissions from one residence to another is unavoidable. Each cavity wall will act as a passive plenum to each and all other residences in a single structure. FACTs had no legal authority to investigate potential migration of contamination beyond the referenced address.



LAW ENFORCEMENT DOCUMENTATION

FACTs project name:	Dartmouth	Form # ML4
Date: October 30, 2007		
Reporting IH:	Caoimhin P. Connell, Forensic IH	

Inventory of Reviewed Documents	1: LPD - Maurer E, IR 07-012124, 03/25/07 2: LPD - Maurer E, CR 07-012124, 03/25/07 3: JCSO – Unknown, PR 07-12124, 03/25/07 4: LPD - Maurer E, PA 201732, 03/25/07 5: LPD - Maurer E, WA B070956, 03/25/07 6: LPD – Leoni K, VS 07-012124, , 03/25/07 7: LPD – Combs D, IR 07-013487, Unknown 8: LPD - Combs D, CR 07-013487, 4/4/07 9: LPD – Combs D, PA 202426, 4/4/07 10: LPD – Combs D, WA H070825, 4/4/07 11: LPD – Monn B, IR 07-012062, Unknown 12: LPD – Nokes Requests for reports (various) 13: LPD – Unknown, Call history to subject property
Described method(s) of production	Possession, smoking and use
Chemicals identified by the LEA as being present	None
Cooking areas identified	None
Chemical storage areas identified	None
LE Observation on areas of contamination or waste disposal	None

CR - Custody Report
 IR – Incident Report and Narrative
 JCSO – Jefferson County Sheriff's Office
 LPD – Lakewood Police Department
 PA – Penalty Assessment/ Summons
 PR – Property Report
 VS – Voluntary Statement
 WA – Warrantless Arrest Affidavit



FIELD OBSERVATIONS

FACTs project name:	Dartmouth	Form # ML5
Date: October 30, 2007		
Reporting IH:	Caoimhin P. Connell, Forensic IH	

Structure: 1

Functional Space (s): 1,3,5,7,8,9

Item	Yes or Number	No	Item	Yes or Number	No
Acids		X	Heet or similar (MeOH)		X
Aerosol cans		X	Hydrogen peroxide		X
Alcohols (MeOH, EtOH)		X	Iodine		X
Ammonia		X	Kitty litter		X
Ammunition		X	Lead		X
Bags of salt		X	Lithium		X
Bases		X	Match components		X
Basters/Pipettes		X	Mercury		X
Batteries		X	Methamphetamine	X	
Bi-phasic wastes		X	Modified coolers		X
Booby traps (trips, triggers, etc)		X	Needles/Syringes		X
Bullet holes		X	Other OTC		X
Chemical storage		X	Phenyl-2-propanone		X
Corrosion on surfaces		X	Presence of cats		X
Colored wastes		X	Pseudoephedrine		X
Drug paraphernalia		X	Red P		X
Empty OTC Bottles		X	Solvents - ketones, etc		X
Ephedrine		X	Solvents -aromatics		X
Filters		X	Urine containers		X
Gas cylinders		X	Weapons		X
Gerry cans		X	Yellow staining		X
Glassware		X			

Notes

- ① Present but not as indicia
- ② Copious or unusual quantities
- ③ Present in normal household expectations
- ④ Modified in manner consistent with clanlab use



FIELD OBSERVATIONS

FACTs project name:	Dartmouth	Form # ML5
Date: October 30, 2007		
Reporting IH:	Caoimhin P. Connell, Forensic IH	

Structure: 1

Functional Space (s): 2,4,6, Exterior grounds

Item	Yes or Number	No	Item	Yes or Number	No
Acids		X	Heet or similar (MeOH)		X
Aerosol cans		X	Hydrogen peroxide		X
Alcohols (MeOH, EtOH)		X	Iodine		X
Ammonia		X	Kitty litter		X
Ammunition		X	Lead		X
Bags of salt		X	Lithium		X
Bases		X	Match components		X
Basters/Pipettes		X	Mercury		X
Batteries		X	Methamphetamine		X
Bi-phasic wastes		X	Modified coolers		X
Booby traps (trips, triggers, etc)		X	Needles/Syringes		X
Bullet holes		X	Other OTC		X
Chemical storage		X	Phenyl-2-propanone		X
Corrosion on surfaces		X	Presence of cats		X
Colored wastes		X	Pseudoephedrine		X
Drug paraphernalia		X	Red P		X
Empty OTC Bottles		X	Solvents - ketones, etc		X
Ephedrine		X	Solvents -aromatics		X
Filters		X	Urine containers		X
Gas cylinders		X	Weapons		X
Gerry cans		X	Yellow staining		X
Glassware		X			

Notes

- ① Present but not as indicia
- ② Copious or unusual quantities
- ③ Present in normal household expectations
- ④ Modified in manner consistent with clanlab use



INDIVIDUAL SEWAGE DISPOSAL SYSTEM FIELD FORM

FACTs project name:	Dartmouth	Form # ML7
Date: October 30, 2007		
Reporting IH:	Caoimhin P. Connell, Forensic IH	

	Yes	No	N/C
Does the property have an ISDS		X	
Is there unusual staining around internal drains		X	
Are solvent odors present from the internal drains		X	
Are solvent odors present from the external sewer drain stacks			X
Was the septic tank lid(s) accessible	NA		
Was the leach field line accessible			
Was the septic tank or leach field lines opened			
Are solvent odors present from the leach field lines (if "yes" see below)			
Are solvent odors present from the septic tank (if "yes" see below)			
Is "slick" present in the septic tank			
Are biphasic (aqueous-organic) layers present in the septic tank			
Was pH measured in the septic tank			
Were organic vapours measured in the septic tank (if "yes" see below)			
Is there evidence of wastes being disposed down internal drains			
Is sampling of the ISDS warranted		NA	
Were calawasi/drum thief samples collected from the septic tank		NA	

*NC = Not checked

Qualitative Organic Vapor Monitoring

Photo ionization detector model	NA
Photo ionization lamp E (in Ev)	
Photo ionization Calibration	
Flame ionization detector model	
Flame ionization Calibration	

Location	PID*	FID*

*Units of measurement are in parts per million equivalents compared to the calibration vapor.



PRE-REMEDIATION PHOTOGRAPH LOG SHEET

FACTs project name:	Dartmouth	Form # ML8
Date: October 30, 2007		
Reporting IH:	Caoimhin P. Connell, Forensic IH	

Listed times may not be correct.

Name ^	Date taken	Name ^	Date taken
Attic	10/30/2007 11:33 AM	Duct interior (2)	10/30/2007 11:20 AM
Attic (2)	10/30/2007 11:33 AM	Duct interior (3)	10/30/2007 11:20 AM
Attic (3)	10/30/2007 11:34 AM	Duct interior (4)	10/30/2007 11:22 AM
Attic (4)	10/30/2007 11:34 AM	Duct interior (5)	10/30/2007 11:22 AM
Attic (5)	10/30/2007 11:39 AM	Duct interior (6)	10/30/2007 11:22 AM
Attic (6)	10/30/2007 11:39 AM	Exterior	10/30/2007 10:38 AM
Attic (7)	10/30/2007 11:39 AM	Exterior (2)	10/30/2007 10:39 AM
Attic (8)	10/30/2007 11:39 AM	Exterior (3)	10/30/2007 10:48 AM
Attic (9)	10/30/2007 11:40 AM	Exterior (4)	10/30/2007 10:49 AM
Behind DS shower	10/30/2007 12:01 PM	Exterior (5)	10/30/2007 11:16 AM
DS Bath	10/30/2007 11:55 AM	Exterior (6)	10/30/2007 11:16 AM
DS Bath (2)	10/30/2007 11:55 AM	Exterior (7)	10/30/2007 11:16 AM
DS Bathroom	10/30/2007 12:00 PM	IMG_6724	10/30/2007 11:17 AM
DS Bedroom	10/30/2007 11:57 AM	Kitchen	10/30/2007 10:46 AM
DS Bedroom (2)	10/30/2007 11:55 AM	Kitchen (2)	10/30/2007 10:46 AM
DS Bedroom (3)	10/30/2007 11:54 AM	Kitchen (3)	10/30/2007 10:58 AM
DS Bedroom (4)	10/30/2007 11:53 AM	Kitchen (4)	10/30/2007 10:54 AM
DS Bedroom (5)	10/30/2007 11:53 AM	Kitchen (5)	10/30/2007 10:55 AM
DS Bedroom (6)	10/30/2007 11:53 AM	Kitchen (6)	10/30/2007 10:59 AM
DS Bedroom (7)	10/30/2007 11:52 AM	Kitchen (7)	10/30/2007 11:00 AM
DS Bedroom duct	10/30/2007 11:56 AM	Ladder decon	10/30/2007 01:23 PM
DS Bedroom duct (2)	10/30/2007 11:55 AM	Ladder decon (2)	10/30/2007 01:21 PM
DS Bedroom duct (3)	10/30/2007 11:55 AM	Ladder decon (3)	10/30/2007 01:21 PM
DS Bedroom wall cavity	10/30/2007 12:04 PM	Livingroom	10/30/2007 10:43 AM
DS Bedroom wall cavity (2)	10/30/2007 11:59 AM	Livingroom (2)	10/30/2007 10:44 AM
DS Bedroom wall cavity (3)	10/30/2007 11:58 AM	Livingroom (3)	10/30/2007 10:44 AM



PRE-REMEDATION PHOTOGRAPH LOG SHEET

FACTs project name:	Dartmouth	Form # ML8
Date: October 30, 2007		
Reporting IH:	Caoimhin P. Connell, Forensic IH	

Listed times may not be correct.

Name ^	Date taken	Name ^	Date taken
Livingroom (4)	10/30/2007 10:49 AM	Shed wall cavity	10/30/2007 11:10 AM
Livingroom (5)	10/30/2007 10:49 AM	Shed wall cavity (2)	10/30/2007 11:11 AM
Livingroom (6)	10/30/2007 11:18 AM	Shed wall cavity (3)	10/30/2007 11:11 AM
Livingroom (7)	10/30/2007 11:06 AM	Shed wall cavity (4)	10/30/2007 11:11 AM
Livingroom (8)	10/30/2007 11:04 AM	Shed wall cavity (5)	10/30/2007 11:11 AM
Livingroom (9)	10/30/2007 11:19 AM	Shed wall cavity (6)	10/30/2007 11:12 AM
Livingroom (10)	10/30/2007 11:21 AM	Shed wall cavity (7)	10/30/2007 11:12 AM
Livingroom (11)	10/30/2007 10:49 AM	Stairway	10/30/2007 11:51 AM
Livingroom (12)	10/30/2007 11:06 AM	Stairway (2)	10/30/2007 11:51 AM
Livingroom (13)	10/30/2007 11:21 AM	Stairway (3)	10/30/2007 11:51 AM
Master bath	10/30/2007 11:43 AM	Stairway (4)	10/30/2007 10:44 AM
Master bath (2)	10/30/2007 11:43 AM	US Bedroom	10/30/2007 11:30 AM
Master bedroom	10/30/2007 11:49 AM	US Bedroom duct	10/30/2007 11:29 AM
Master bedroom (2)	10/30/2007 11:48 AM	US Bedrrom	10/30/2007 11:25 AM
Master bedroom (3)	10/30/2007 11:48 AM	US Bedrrom (2)	10/30/2007 11:26 AM
Master bedroom (4)	10/30/2007 11:48 AM	US Bedrrom (3)	10/30/2007 11:30 AM
Master bedroom (5)	10/30/2007 11:48 AM	US Bedrrom (4)	10/30/2007 11:26 AM
Master bedroom (6)	10/30/2007 11:47 AM	US Bedrrom (5)	10/30/2007 11:26 AM
Master bedroom duct	10/30/2007 11:46 AM	Utility Room	10/30/2007 12:12 PM
Mould behind DS shower	10/30/2007 12:03 PM	Utility Room (2)	10/30/2007 12:12 PM
Mould behind DS Shower...	10/30/2007 12:02 PM	Utility Room (3)	10/30/2007 12:09 PM
Shed	10/30/2007 11:09 AM	Utility Room (4)	10/30/2007 12:08 PM
Shed (2)	10/30/2007 11:15 AM	Utility Room (5)	10/30/2007 12:08 PM
Shed (3)	10/30/2007 11:16 AM	Utility room (6)	10/30/2007 11:58 AM
Shed (4)	10/30/2007 11:16 AM	Utility room (7)	10/30/2007 11:58 AM
Shed (5)	10/30/2007 11:16 AM	Utility room (8)	10/30/2007 11:57 AM
		Utility room (9)	10/30/2007 11:57 AM
		Utility Room Duct	10/30/2007 12:06 PM
		Utility Room Duct (2)	10/30/2007 12:06 PM
		Utility Room Duct (3)	10/30/2007 12:07 PM
		Utility Room Duct (4)	10/30/2007 12:06 PM
		Utility Room Duct (5)	10/30/2007 12:04 PM
		Utility Room Duct (6)	10/30/2007 12:06 PM
		Utility room duct (7)	10/30/2007 12:07 PM



CERTIFICATION, VARIATIONS AND SIGNATURE SHEET

FACTs project name:	Dartmouth	Form # ML14
Date:	October 30, 2007	
Reporting IH:	Caoimhin P. Connell, Forensic IH	

Certification

Statement	Signature
I do hereby certify that I conducted a preliminary assessment of the subject property in accordance with 6 CCR 1014-3, § 4.	
I do hereby certify that the property has been decontaminated in accordance with the procedures set forth in 6 CCR 1014-3, § 5.	XXXXXXXXXXXXXXXXXXXXXXXXXXXX
I do hereby certify that I conducted post-decontamination clearance sampling in accordance with 6 CCR 1014-3, § 6.	XXXXXXXXXXXXXXXXXXXXXXXXXXXX
I do hereby certify that the cleanup standards established by 6 CCR 1014-3, § 7 have been met as evidenced by testing I conducted.	XXXXXXXXXXXXXXXXXXXXXXXXXXXX
I do hereby certify that the analytical results reported here are faithfully reproduced.	

In the section below, describe any variations from the standard.

None known.

Pursuant to the language required in 6 CCR 1014-3, § 8:

~~I do hereby certify that I conducted a preliminary assessment of the subject property in accordance with 6 CCR 1014-3, § 4, and that I conducted post-decontamination clearance sampling in accordance with 6 CCR 1014-3, § 6. I further certify that the property has been decontaminated in accordance with the procedures set forth in 6 CCR 1014-3, § 5, and that the cleanup standards established by 6 CCR 1014-3, § 7 have been met as evidenced by testing I conducted.~~

Signature _____ Date: _____

OR

I do hereby certify that I conducted a preliminary assessment of the subject property in accordance with 6 CCR 1014-3, § 4. ~~I further certify that the cleanup standards established by 6 CCR 1014-3, § 7 have been met as evidenced by testing I conducted.~~

Signature 

Date: November 17, 2007





FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.

CONSULTANT STATEMENT OF QUALIFICATIONS

(as required by State Board of Health Regulations 6 CCR 1014-3 Section 8.21)

FACTs project name:	Dartmouth	Form # ML15
Date:	November 17, 2007	
Reporting IH:	Caoimhín P. Connell, Forensic IH	

Caoimhín P. Connell, is a private consulting forensic industrial hygienist meeting the definition of an "Industrial Hygienist" as that term is defined in the Colorado Revised Statutes §24-30-1402. Mr. Connell has been a practicing Industrial Hygienist in the State of Colorado since 1987 and has been involved in clandestine drug lab (including meth-lab) investigations since May of 2002.

Mr. Connell is a recognized authority in methlab operations and is a Certified Meth-Lab Safety Instructor through the Colorado Regional Community Policing Institute (Colorado Department of Public Safety, Division of Criminal Justice). Mr. Connell has provided methlab training for officers of over 25 Colorado Police agencies, 20 Sheriff's Offices, federal agents, and probation and parole officers from the 2nd, 7th and 9th Colorado judicial districts. He has provided meth-lab lectures to prestigious organizations such as the County Sheriff's of Colorado, the American Industrial Hygiene Association, and the National Safety Council.

Mr. Connell is Colorado's only private consulting Industrial Hygienist certified by the Office of National Drug Control Policy High Intensity Drug Trafficking Area Clandestine Drug Lab Safety Program, and P.O.S.T. certified by the Colorado Department of Law (Certification Number B-10670); he is a member of the Colorado Drug Investigators Association, and the American Industrial Hygiene Association.

He has received over 120 hours of highly specialized law-enforcement sensitive training in meth-labs and clan-labs (including manufacturing and identification of booby-traps commonly found at meth-labs) through the Iowa National Guard/Midwest Counterdrug Training Center and the Florida National Guard/Multijurisdictional Counterdrug Task Force, St. Petersburg College as well as through the U.S. Bureau of Justice Assistance (US Dept. of Justice). Additionally, he received extensive training in the Colorado Revised Statutes, including Title 18, Article 18 "Uniform Controlled Substances Act of 1992."

Mr. Connell is also a law enforcement officer in the State of Colorado, who has conducted clandestine laboratory investigations and performed risk, contamination, hazard and exposure assessments from both the law enforcement (criminal) perspective, and from the civil perspective in residences, apartments, motor vehicles, and condominiums. Mr. Connell has conducted over 60 assessments in illegal drug labs.

He has extensive experience performing assessments pursuant to the Colorado meth-lab regulation, 6 CCR 1014-3, (State Board Of Health *Regulations Pertaining to the Cleanup of Methamphetamine Laboratories*) and was an original team member on two of the legislative working-groups which wrote the regulations for the State of Colorado. Mr. Connell was the primary contributing author of Appendix A (*Sampling Methods And Procedures*) and Attachment to Appendix A (*Sampling Methods And Procedures Sampling Theory*) of the Colorado regulations. He has provided expert witness testimony in civil cases and testified before the Colorado Board of Health and Colorado Legislature Judicial Committee regarding methlab issues.

Mr. Connell, who is a committee member of the ASTM International Forensic Sciences Committee, is the sole sponsor of the draft ASTM E50 *Standard Practice for the Assessment of Contamination at Suspected Clandestine Drug Laboratories*, and he is an author of a recent (2007) AIHA Publication on methlab assessment and remediation.

FINAL DOCUMENTATION CHECKLIST

FACTs project name:	Dartmouth	Form # ML16
Date: October 30, 2007		
Reporting IH:	Caoimhin P. Connell, Forensic IH	

DOCUMENT	Included
FACT Property description field form	<i>Paul</i>
FACTs Functional space inventory field form	<i>Paul</i>
FACTs Law Enforcement documentation field form	<i>Paul</i>
FACTs Field Observations field form	<i>Paul</i>
FACTs Contamination migration field form	<i>Paul</i>
FACTs ISDS field form	<i>Paul</i>
FACTs Pre-remediation photographs	<i>Paul</i>
FACTs Post-remediation photographs	NA
FACTs Pre-remediation photograph log sheet field form	<i>Paul</i>
FACTs Post-remediation photograph log sheet field form	NA
FACTs Drawing of Cook area(s) field form	<i>Paul</i>
FACTs Drawing of Storage area(s) field form	<i>Paul</i>
FACTs Drawing of Waste area(s) field form	<i>Paul</i>
FACTs Drawing General site field form	<i>Paul</i>
FACTs description sampling procedures, handling, and QA/QC	<i>Paul</i>
FACTs drawing of final sample locations	<i>Paul</i>
FACTs health and safety procedures used in accordance with OSHA	<i>Paul</i>
FACTs post-decontamination samples locations	NA
FACTs Analytical Laboratory Documentation Form	<i>Paul</i>
FACTs SOQs	<i>Paul</i>
FACTs Certification of procedures, results, and variations from standard practices.	<i>Paul</i>
Analytical Laboratory Reports	<i>Paul</i>
Available Law Enforcement documents (INCLUDED BY REFERENCE ONLY)	<i>Paul</i>
Plumbing inspection field form (plumbing system integrity and identification of sewage disposal mechanism)	<i>Paul</i>
Identification of common ventilation systems with adjacent units or common areas.	<i>Paul</i>
A description of the analytical methods used and laboratory QA/QC requirements.	<i>Paul</i>
Contractor's description of the decontamination procedures used and a description of each area that was decontaminated	NA
Contractor's description of the removal procedures used and a description of areas where removal was conducted, and the materials removed.	
Contractor's description of the encapsulation procedures used and a description of the areas and/or materials where encapsulation was performed.	
Contractor's description of the waste management procedures used, including handling and final disposition of wastes.	



APPENDIX B

ANALYTICAL REPORTS FOR FACTS SAMPLES

FACTs project name: Dartmouth	Form # ML17
Date: October 30, 2007	Alcohol Lot#: A0703 Gauze Lot#: G0702
Reporting IH: Caoimhín P. Connell, Forensic IH	Preliminary <input checked="" type="checkbox"/> Intermediate <input type="checkbox"/> Final <input type="checkbox"/>

Sample ID DM103007-	Type	Area/ Volume/ Weight	Location	Func. Space	Dimensions	Substrate	Result
01	W		KITCHEN/TOP OF FRIDGE	1	9x9	PTD. METAL	
02	V		LIVING ROOM/CARPET	2	19x7	CARPET	
03	W		DETACHED OUTSIDE SHED/W.WALL	3	12x12	ALUMIN. SIDING	
04	W		FURNACE RETURN UNDER STAIRS	3	8x3	WOOD	
05	W		FRONT(SO.) BDRM/TOP SHELF OF CIST.	4	7x9	PTD. WOOD	
06	W		ATTIC/SHELVING	5	7 1/2 x 9 1/2	PTD. WOOD	
07	W		UPSTRS BATH/ CORNER OVER SINK	6	9x9	PTD. DRY	
08	W		UPSTRS MASTER BDRM/NO. WALL	7	9x9	PTD. DRY	
09	W		BASEMENT BATH/TOP OF SHELF BY SHWR	8	9x5	PTD. WOOD	
10	W		BSMNT/ UTILITY ROOM/TOP OF DUCT	9	6x7	GA/N. METAL	

Sample Types: W=Wipe; V=Microvacuum; A=Air; B=Bulk; L=liquid



ANALYTICAL CHEMISTRY INC.

CDL SAMPLING & CUSTODY FORM

4611 S 134th Pl, Ste 200 Tukwila WA 98168-3240
Website: www.aclilabs.com

Phone: 206-622-8353
FAX: 206-622-4623

Page 1 of 1
Please do not write in shaded areas.

SAMPLING DATE: October 30, 2007	REPORT TO: Caoimhin P. Connell	ANALYSIS REQUESTED
PROJECT Name/No: Dartmouth	COMPANY: Forensic Applications, Inc.	1 Methamphetamine
eMail: Fiosrach@aol.com	ADDRESS: 185 Bounty Hunters Lane, Bailey, CO 80421	2 Use entire contents
SAMPLER NAME: Caoimhin P. Connell	PHONE: 303-903-7494	3
		4
		5
		6 Not Submitted

LAB Number	Sample Number	SAMPLE MATRIX			ANALYSIS REQUESTS						SAMPLER COMMENTS	LAB COMMENTS	No of Containers	
		Wipe	Vacuum	Other	1	2	3	4	5	6				
	DM103007-01	W			X	X								1
	DM103007-02			✓	X	X								1
	DM103007-03	W			X	X								1
	DM103007-04	W			X	X								1
	DM103007-05	W			X	X								1
	DM103007-06	W			X	X								1
	DM103007-07	W			X	X								1
	DM103007-08	W			X	X								1
	DM103007-09	W			X	X								1
	DM103007-10	W			X	X								1

CHAIN OF CUSTODY RECORD		Wipes Results in:		Total Number of Containers (verified by laboratory)	
PRINT NAME	Signature	COMPANY	DATE	<input type="checkbox"/> µg/100cm ²	<input checked="" type="checkbox"/> Total µg
Caoimhin P. Connell	<i>C Connell</i>	FACTS, Inc.	10/30/07		
MIA SAZON	<i>MIA SAZON</i>	ACI	11/10/07	4:45 PM	10
				1:00	
				<input type="checkbox"/> 24 Hours (2X)	<input type="checkbox"/> Custody Seals: Yes
				<input type="checkbox"/> 2 Days (1.75X)	<input type="checkbox"/> Container: Intact
				<input type="checkbox"/> 3 Days (1.5X)	<input type="checkbox"/> Temperature: Ambient
				<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Inspected By: MIA SAZON
					<input type="checkbox"/> Lab File No. 07172-08



ANALYTICAL CHEMISTRY INC.

Established in 1979

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E-mail: aci@acilabs.com

Website: www.acilabs.com

Lab Reference:	07172-07
Date Received:	November 1, 2007
Date Completed:	November 3, 2007

November 5, 2007

CAOIMHIN P CONNELL
FORENSIC APPLICATIONS INC
185 BOUNTY HUNTER'S LN
BAILEY CO 80421

CLIENT REF: Prospect

Dartmouth field blank

SAMPLES: wipes/3

ANALYSIS: Methamphetamine by Gas Chromatography-Mass Spectrometry.

RESULTS: in total micrograms (ug)

Sample	Methamphetamine, ug	% Surrogate Recovery
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
PM103007 - 03	< 0.030	101
QA/QC Method Blank	< 0.004	
QC 0.100 ug Standard	0.099	
QA 0.020 ug Matrix Spike	0.021	
QA 0.020 ug Matrix Spike Duplicate	0.021	
Method Detection Limit (MDL)	0.004	
Practical Quantitation Limit (PQL)	0.030	

'<': less than, not detected above the PQL

Robert M. Orheim
Director of Laboratories

APPENDIX C
DIGITAL DISC