



**FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.**

**Preliminary Assessment  
of an  
Identified Illegal Drug Laboratory  
at**

**1040 South Upham Street  
Lakewood, CO 80226-4555**

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## EXECUTIVE SUMMARY

On September 20, 2000, the West Metro Drug Task Force (WMTF) conducted a law enforcement action at 1040 South Upham Street, Lakewood, CO (the subject property). During that action, an unspecified quantity of methamphetamine was discovered in the residence. Also during that action, a methamphetamine manufacturing operation was conclusively identified by the WMTF. Subsequent interviews with the property residents revealed that methamphetamine was manufactured by a pseudoephedrine reduction method known as the “hypo method,” and methamphetamine had been smoked in the property.

During a property transaction, the potential buyer (Stajcar), pursuant to Colorado’s Real Estate methamphetamine disclosure and testing statute as described by CRS §38-35.7-103, became aware of the history of the property. At the point of the seller’s disclosure to Stajcar, “discovery” and “notification” occurred as those terms are used in CRS 25-18.5-101.

Based on this information:

- An illegal drug manufacturing process existed at the subject property from at least September 20, 2000 forward. An illegal drug laboratory, as that term is defined in CRS §25-18.5-101(2.7), existed in the property from March 30, 2005 (the effective date of the current methamphetamine regulations and statutes in Colorado) and continues to exist at the time of this report.
- A Class 1 Public Nuisance, as defined in CRS §16-13-303(1) existed at the subject property from September 22, 2000 forward, and continues to exist at the time of this report.
- “Discovery” and “Notification,” as those terms are used in CRS §25-18.5-103(1)(a) occurred during disclosure statements made by the seller to the potential buyer.

In May 2010, Forensic Applications Consulting Technologies, Inc. (FACTs) was contracted by the potential buyer to perform a State mandated Preliminary Assessment at the subject property. Based on that assessment, FACTs has made the following observations:

- The property exhibits overt noncompliance with Colorado’s methamphetamine cleanup standards.
- Widespread methamphetamine contamination exists throughout the entire structure including the attic and the exterior shed.



# INTRODUCTION

## ***Property Description***

The subject property is a 1959 bi-level single family residence. For regulatory purposes, traditionally nontaxable spaces are included in the estimation of the square footage of the property. In this case, including the garage and exterior shed, but excluding the attic, the subject property contained approximately 2,528 square feet of floor space.

The stand alone subject property has a forced air furnace system which does not communicate with any other property.

# REGULATORY REQUIREMENTS

## ***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).

## ***State Requirements***

### **Preliminary Assessment**

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,” the property must either be demolished or 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 these regulations, information obtained in the Preliminary Assessment, and those findings, enter the public domain and are not subject to confidentiality.<sup>1</sup>

The Preliminary Assessment must be conducted according to specified requirements<sup>2</sup> 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 (DVD). The disc contains mandatory information and photographs required by State regulation for a Preliminary Assessment. This Preliminary Assessment is not complete without the DVD and all associated support documents.

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 remaining contents, was deemed a Class 1 Public Nuisance. As such, the subject property must be

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<sup>1</sup> Section 8.26 of 6 CCR 1014-3

<sup>2</sup> Section 4 of 6 CCR 1014-3



remediated according to State Board of Health regulations 6-CCR-1014-3 or demolished (CRS §25-18.5-103).

Following decontamination, Regulations require follow-up sampling to confirm that the remediation process was successful in reducing the contamination levels.

## **Governing Body**

Based on the best information available, Jefferson County Public Health is the “Governing Body” as defined in CRS §25-18.5-101:

Mr. Craig Sanders  
Environmental Protection Supervisor  
Jefferson County Department of Health and Environment  
1801 19th Street  
Golden, CO 80401

## **PRELIMINARY ASSESSMENT**

### ***Preliminary Hypothesis***

During the Preliminary Assessment (PA), the initial hypothesis is made that the subject area is clean and data will be collected to find support for this hypothesis. Any reliable data that fails to support the hypothesis or challenges the hypothesis, including police records, visual clues of illegal production, storage, or use, or documentation of drug paraphernalia being present, is considered conclusive, and requires the Industrial Hygienist to accept the null hypothesis and declare the area non-compliant.<sup>3</sup> 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.

For this project, the registered owner of the property informed FACTs personnel that he had manufactured methamphetamine at the property, and no clean-up had occurred pursuant to Colorado’s regulations. Furthermore, posted on the front and back doors of the property were notices from the WMTF identifying the property as a methamphetamine laboratory. The information was sufficient to challenge the primary hypothesis and conclude the potential for widespread contamination.

Contrary to common belief, sampling is **not** required by regulation 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:<sup>4</sup>

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<sup>3</sup> This language and emphasis is verbatim from Appendix A (mandatory) of 6 CCR 1014-3

<sup>4</sup> Section 4.6 of 6 CCR 1014-3



*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.*

For this PA, we did not rely exclusively on the law enforcement documents and statements from the registered owner; rather we did collect 21 samples. From the sample suite, we selected four strategic samples and submitted those for analysis. The samples confirmed the presence of methamphetamine in excess of the regulatory threshold.

### **Initial Statement on Hypothesis Testing**

Regarding this subject property, information from law enforcement and the registered owner, and our observations and objective sampling performed by FACTs, confirmed methamphetamine contamination. The findings, in the totality of circumstances, challenged the Primary Hypothesis, and required FACTs to accept the null hypothesis and declare the primary residence and the shed and all contents therein as non-compliant.

### ***Elements of the Preliminary Assessment***

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



Mandatory Final Documents 6-CCR 1014-3	DOCUMENTATION	Included
§8.1	Property description field form	<i>Cal</i>
§8.2	Description of manufacturing methods and chemicals	<i>Cal</i>
§8.3	Law Enforcement documentation review discussion	<i>Cal</i>
§8.4	Description and Drawing of Storage area(s)	<i>Cal</i>
§8.5	Description and Drawing of Waste area(s)	<i>Cal</i>
§8.6	Description and Drawing of Cook area(s)	<i>Cal</i>
§8.7	Field Observations field form	<i>Cal</i>
	FACTs Functional space inventory field form	<i>Cal</i>
§8.8	Plumbing inspection field form	<i>Cal</i>
	FACTs ISDS field form	<i>Cal</i>
§8.9	Contamination migration discussion	<i>Cal</i>
§8.10	Identification of common ventilation systems	<i>Cal</i>
§8.11	Description of the sampling procedures and QA/QC	<i>Cal</i>
§8.12	Analytical Description and Laboratory QA/QC	<i>Cal</i>
§8.13	Location and results of initial sampling with drawings	<i>Cal</i>
§8.14	FACTs health and safety procedures in accordance with OSHA	<i>Cal</i>
§8.15 -§8.19	These sections are not applicable to a Preliminary Assessment	NA
§8.20	FACTs Pre-remediation photographs and log	<i>Cal</i>
	FACTs Post-remediation photographs and log	NA
§8.21	FACTs SOQ	<i>Cal</i>
§8.22	Certification of procedures, results, and variations	<i>Cal</i>
§8.23	Mandatory Certification Language	<i>Cal</i>
§8.24	Signature Sheet	<i>Cal</i>
NA	Analytical Laboratory Reports	<i>Cal</i>
	FACTs final closeout inventory document	NA
	FACTs Field Sampling Forms	<i>Cal</i>

**Table 1**  
**Inventory of Mandatory Elements and Documentation**

### ***Exterior Structures***

Pursuant to State regulations, “Property” means anything that may be the subject of ownership or possession, including, but not limited to, land, buildings, structures, vehicles and personal belongings. Further, pursuant to Colorado Revised Statutes §25-18.5-101, the definition of a "drug laboratory" includes all proximate areas that are *likely* to be contaminated as a result of manufacturing, processing, cooking, use, disposing, or storing of methamphetamine, its precursors, waste products or equipment.

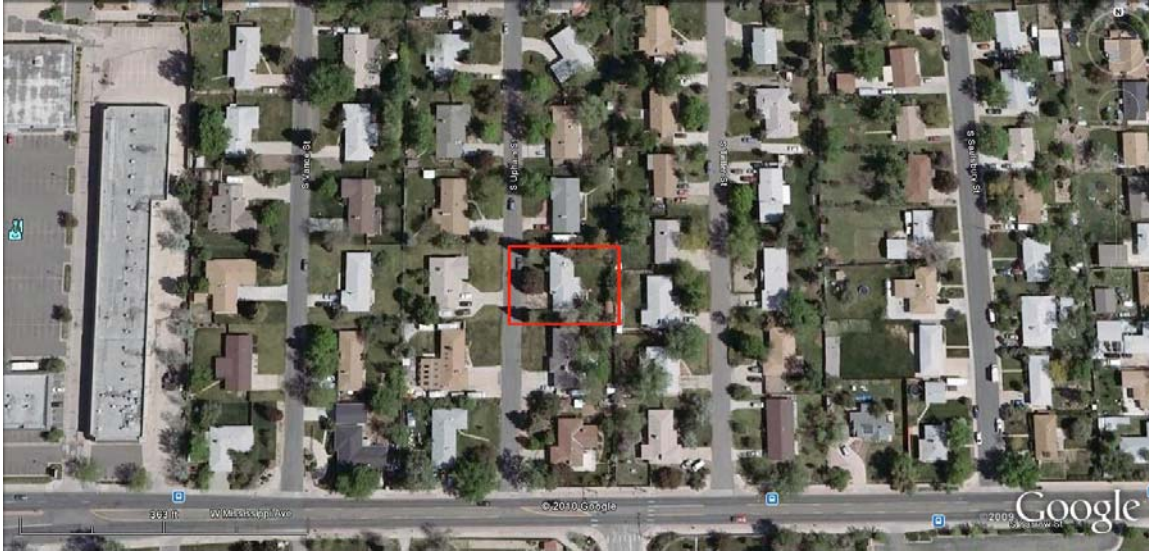
As such, we initially included the following structures in the Preliminary Assessment:

- 1) Structure 1: Primary Residential Structure
- 2) Structure 2: Exterior Shed

A general layout of the structures is depicted in the Figure below. The subject property is outlined in red.







**Figure 1**  
**General Site Layout<sup>5</sup>**

### ***Review of Law Enforcement Documentation***

As part of the Preliminary Assessment, FACTs is required by regulation<sup>6</sup> to review available law enforcement documents pertinent to a subject property. During this project, Jefferson County Sheriff's Office, the Lakewood Police Department and the West Metro Drug Task Force all exhibited the highest level of professionalism and cooperated with the requirements of our Preliminary Assessment. Each agency responded to our request for information. Each agency informed us that no records were available for the property. We were informed that records were initially maintained, but due to the fact that the enforcement action occurred 10 years earlier, the records are no longer available.

### ***Visual Inspection of the Property***

As part of the Preliminary Assessment, on May 12, 2010, Mr. Caoimhín P. Connell, Forensic Industrial Hygienist with FACTs, performed a visual inspection of the subject property. Mr. Connell was assisted in the field by Mr. Robert Seel, Technician.<sup>7</sup>

Pursuant to regulatory requirements, the subject property was assigned into "functional spaces," and an indicia inventory and assessment was performed for each functional space.

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<sup>5</sup> Taken from Google Earth<sup>TM</sup> and the USGS.

<sup>6</sup> 6 CCR 1014-3 (Section 4.2)

<sup>7</sup> Ms. Carty and Mr. Seel both received a training certificate in Clandestine Drug Lab Safety through the Colorado Regional Community Policing Institute (CRCPI) sponsored by the US Dept. of Justice High Intensity Drug Trafficking Area fund.



The property was essentially in an “unoccupied” condition but contained residual chattels and major appliances.

To protect the property owner against the introduction of contaminants into the subject property, the 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. The ladder FACTs used during this assessment had been cleaned at a car wash prior to use.

## Functional Space Summary

During a Preliminary Assessment, the Industrial Hygienist is required by regulation to divide the study area into “functional spaces,” and evaluate 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.<sup>8</sup>

A general overview of each space is provided in the following discussion. Indicators are detailed in FACTs field form ML5, included in the appendix of this report. For evaluation purposes, the following Functional Spaces have been identified and are addressed below:

Structure	Functional Space	Describe the functional space
1	1	Living Room and contiguous Dining Room
1	2	Kitchen
1	3	Patio
1	4	Back hallway with two linen closets
1	5	Upstairs west Bedroom
1	6	Upstairs northwest Bedroom
1	7	Upstairs northeast Bedroom (Master) and Bathroom en suite
1	8	Upstairs Bathroom
1	9	Downstairs Recreation Room
1	10	Downstairs northwest Bedroom
1	11	Downstairs Furnace Room
1	12	Downstairs Bathroom
1	13	Downstairs South Shop and area under the stairs
1	14	Downstairs northeast Bedroom
1	15	Furnace System
1	16	Attic
1	17	Garage
2	1	Exterior shed

**Table 2**  
**Functional Space Inventory**

<sup>8</sup> Asbestos Containing Materials in Schools; Final Rule and Notice, Title 40 CFR Part 763, Fed. Reg. Vol. 52, No. 210, Fri. Oct. 30, 1987



## **Structure Number 1- Main Residence**

### **Functional Space 1: Living Room and Dining Room**

This is the area upon entry into the structure from the west door (main entrance). The area is largely an open plan with a large thermal bypass leading to the downstairs areas. This space contained several inconclusive visible indicators consistent with methamphetamine abuse and activity.

Two samples were collected from this functional space: 1) Furnace interior sample from the return air grille and, 2) the tops of the light shades in the dining room.

There are three primary competing regulatory factors in the collection of authoritative bias judgmental sampling as described in the regulations:

- 1) Collect at least 500 cm<sup>2</sup> from each functional space AND
- 2) Collect samples only from nonporous surfaces AND
- 3) Collect samples only from those areas with the highest probability of contamination.

In some cases, it may be physically impossible to satisfy all three mandatory criteria. For example, in some cases, the only nonporous surface in a space may be too small, or in some cases, there may not be a nonporous surface in the entire functional space. Therefore, there becomes a need to balance the regulatory requirements with the physical reality of the site and the objectives of the sampling protocols.

Due to the primary objective of sampling (identified by item number “3” in the above list), the surfaces so selected are frequently convoluted and intricate surfaces. As such, the measured delineations are frequently the summation of several specific surface components. For example, when sampling a light fixture (see Photograph 1 below) the fixture is treated as a single sample item. However, the glass surface of the light fixture is composed of distinct but contiguous identical components which must be summed to equal the necessary surface area. The necessary calculations for the summation are frequently complex and to some degree, the areas are estimates and not precise surface area evaluations.

In this case, for example, the selected location consisted of glass shades that were essentially comprised of interconnected rounded trapezoids. Each trapezoidal surface had a three-dimensional topography which increased the actual surface area over the apparent two-dimensional measurements. Good faith efforts are made to estimate the two-dimensional aspects, but no effort was made to incorporate the three-dimensional contributions. As such, the surfaces used to calculate the concentration is biased low, and therefore, the reported concentrations are biased high.





**Photograph 1**  
**Functional Space 1 Sample**

One of the samples collected from this space (UM051210-1), was below the regulatory threshold ( $0.04 \mu\text{g}/100 \text{ cm}^2$ ) and one of the samples collected from this functional space (UM051210-17) was greater than the regulatory threshold ( $2.8 \mu\text{g}/100 \text{ cm}^2$ ).

### **Functional Space 2: Kitchen**

This space is the room one enters directly from the Living Room or the Dining Room. The term describing the room is used as is commonly understood. According to the registered owner, methamphetamine base was extracted from the solvent by heating the containers of the mixture on the kitchen stove. Therefore, this functional space is identified as a cook area.

A discreet sample collected from the inside of the extractor fan in the kitchen ceiling and the sample was archived.

### **Functional Space 3: Patio**

The covered patio on the east side of the structure appears to be a later addition to the structure. The patio contained inconclusive visual indicators. A discreet sample collected from this space was archived.



#### **Functional Space 4: Back Hallway**

This functional space serves the bathroom and the bedrooms. A composite sample was collected from the tops of the door jambs in the hallway and archived.

#### **Functional Space 5: Upstairs West Bedroom**

This space is delineated as that term is commonly used. A discreet sample was collected from the top of the light fixture in the room and was archived.

#### **Functional Space 6: Upstairs Northwest Bedroom**

This space is delineated as that term is commonly used. There were no visual indicators in this room.

A discreet sample was collected from the top shelf in the closet and was archived.

#### **Functional Space 7: Upstairs Northeast Bedroom and Bathroom**

This space is the Master Bedroom with Master Bathroom *en suite*, as those terms are typically understood. Two samples were collected from this space, one was an investigatory sample and one sample was collected in a manner to conform with the regulations. The “regulatory” sample was archived, and the investigatory sample contained methamphetamine in excess of the regulatory threshold at the UCL95 (see the discussion below for details.)

#### **Functional Space 8: Upstairs Bathroom**

This is the bathroom that is accessed from the upstairs hallway. A discreet sample was collected from the top of the medicine cabinet and was archived. This area contained unusual corrosion on the door hinges, an inconclusive indicator of prohibited chemical processes.

#### **Functional Space 9: Downstairs Recreation Room**

This room is the large room which occupies the west side of the basement. The pool table is located in this room. We recommend salvaging the pool table. This room did not contain any conclusive visual indicators. A discreet sample was collected from the light fixture and was archived.

#### **Functional Space 10: Downstairs Northwest Bedroom**

This is the purple/maroon room that occupies the northwest corner of the basement. This room contained several visual indicators including security devices, and tell-tale staining on the floor. A discreet sample was collected from the floor in the far northwest corner of the floor and was archived.

#### **Functional Space 11: Shop and Furnace Room**

This room is the eastern portion of the basement that contains the bathroom and the furnace room. We did not observe any conclusive indicators on this space. A discreet sample was collected from the top of the furnace duct and was archived.



## Functional Space 12: Downstairs Bath

The downstairs bathroom is located in the eastern half of the basement, and appears to be an ad hoc facility. We did not observe any conclusive indicators in this room. A discreet sample was collected from the painted sewer pipe and was archived.

## Functional Space 13: Downstairs South Shop

This space occupies the southeast quadrant of the basement and includes the area under the stairs. This room contained several visual indicators including staining and structural modifications. A discreet sample was collected from the top of duct south end and was archived.

## Functional Space 14: Downstairs Northeast Bedroom

This space occupies the northeast quadrant of the basement and includes the two closets within the boundaries of the walls. This room contained several visual indicators. A discreet sample was collected from the shelf in the south closet and was archived.

## Functional Space 15: Furnace

Although arguably not a functional space *per se*, the sample collected from the interior of the furnace indicated that methamphetamine contamination in that system was significantly elevated. The sample was collected from the duct interior of the return air grille in the living room.

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%<sup>9</sup> and half<sup>10</sup> of the substance is released from the user's pipe. Of that material which is inhaled, between 33%<sup>11</sup> and 10%<sup>12</sup> of the nominal dose is not absorbed into the body (leaving the remainder airborne). Work conducted by Industrial Hygienists at the National Jewish

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<sup>9</sup> 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)

<sup>10</sup> 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.)

<sup>11</sup> 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.)

<sup>12</sup> 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



Hospital<sup>13</sup> in Denver, Colorado, indicates 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'."*<sup>14</sup>

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 significantly elevated concentrations of methamphetamine, we conclude the furnace was an effective mechanism of dissemination and 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 elevated methamphetamine throughout the entire occupied space, all other sample results notwithstanding.

Therefore, it is for this reason that FACTs confidently concludes that, based on just this sample alone, an high probability of elevated concentrations of methamphetamine exists throughout the residence including all items of debris and personal belongings; even in areas that have not been confirmed as contaminated by sampling. The sample collected from the duct interior was 2.8  $\mu\text{g}/100\text{cm}^2$ .

### **Functional Space 16: Attic**

This attic is an occupiable space and is reasonably large enough to enter or to facilitate storage. We did not observe any visual indicators in the attic. A discreet sample was collected from the surface of a galvanized duct and was archived.

### **Functional Space 17: Garage**

The garage is used here as the term is normally recognized. The garage contained visual indicators. The single discreet sample collected from the top of the light fixture in the garage resulted in significantly elevated methamphetamine concentrations (2.8  $\mu\text{g}/100\text{cm}^2$ ). The sample confirms the assumption of widespread methamphetamine contamination.

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<sup>13</sup> 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.)

<sup>14</sup> 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.)



## **Structure Number 2: Exterior Shed**

### **Functional Space 1: Shed Interior**

We did not observe any visual indicators in the shed. A discreet sample was collected from the light fixture in the shed and was archived. Based on an interview with the registered owner of the property, the registered owner used the shed to house an hypophosphorous acid pseudoephedrine reduction processes.

### **Exterior Grounds**

Although not truly a functional space *per se*, the exterior grounds were assessed independently. The exterior grounds contained several large containers of unknown liquid. The registered owner informed us that the containers were brought onsite several years after the law enforcement action and were not associated with the methamphetamine production which took place on the property.

At the time of our visit, much of the exterior grounds was in a spring state with heavy vegetation and snow cover. We did not observe any signs of stressed vegetation and we did not observe any indications that migration of contaminants would have occurred off-site.

### **Sewerage System**

The Jefferson County Assessor's Office indicates the subject property is on city water and city sewer. Therefore, no inspection of an exterior sewer system, septic tank or leach field was made.

### **Cook and Storage Areas**

The kitchen and the exterior shed were positively identified as areas where the production of methamphetamine took place.

### **Identification of Contamination Migration**

Based on our visual assessment, we do not believe there was a high probability that contamination migrated off-site (except through the public sewer system, where some waste products were presumed to be discarded.)

### **Sample Collection**

#### **Wipe Samples**

The samples collected throughout the subject property comprised primarily of "discreet" samples. Discreet samples are a single wipe, collected from a single area, and submitted for analysis as a unique location.

Wipe samples were collected in a manner consistent with State regulations. The wipe sample medium was individually wrapped commercially available Safeway Brand™ 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, or in some cases, where the surface was restricted or convoluted, the sample was collected first, and the area measured afterwards.

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. The wipe samples were submitted for analysis to Analytical Chemistry Inc. in Tukwila, Washington.

### **Quality Assurance/Quality Control (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***

Field blanks were collected pursuant to regulation and archived.

### ***Cross Contamination***

Prior to the collection of each specific sample area, the Industrial Hygienist and/or his technician donned fresh surgical gloves, to protect against the possibility of cross contamination. The ladder brought onto the property had been decontaminated at a car wash prior to use.

## **Collection Rationale**

### **Primary Objective**

It is a common misconception that the Industrial Hygienist is required to collect samples during a Preliminary Assessment of an illegal drug lab. However, no such requirement exists in Colorado. Rather, regarding samples, 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.



Similarly, there is a misconception that if samples are collected, and the laboratory results are below the value often misinterpreted as the State's regulatory threshold value (0.5 µg/100 cm<sup>2</sup>), the samples necessarily indicate that the area is not contaminated and no action is required. 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 final verification sampling. Although State regulation does not require samples to be collected during a Preliminary Assessment, as part of this Preliminary Assessment, samples were collected.

The data quality objectives of the samples collected during the Preliminary Assessment were to determine, within the context of the regulation, whether or not specific areas such as the attic and the crawlspace could be excluded from the remediation process.

## Sample Results

### Statement of Uncertainty

For all sampling and analytical methods, there is a specific uncertainty associated with the sampling and the analysis. Therefore, for any reported laboratory value, there is a *probability* that the true result is greater than the reported value (Upper Confidence Limit, UCL), or less than the reported value (Lower Confidence Limit, LCL). A laboratory result, therefore, represents a *probable* result which lies between two confidence limits and may be depicted thus:



**Figure 2**  
**Confidence intervals of Reported Values**

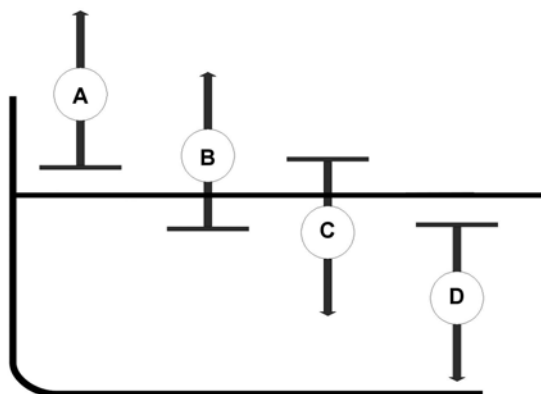
The reported value (RV) lies somewhere between two possible “true” values, the UCL and the LCL.

Compliance, and the decision to remediate or not remediate, is based not only on the reported value, but also on the statistical uncertainty of the results. So, in the drawing below, where the reported value (A) and the LCL are greater than the decision threshold (the horizontal line), we are *confident* the reported value indicates noncompliance. Where the reported value (D) and the UCL are less than the decision threshold, we are *confident* the reported value indicates compliance.

However, there is an ambiguous zone of reported values, such as (B), where although the reported value is greater than the decision threshold, there is a probability the true value



is less than the decision threshold. Similarly, where the reported value is less than the decision threshold, there is a probability the true value is greater than the decision threshold (C).



**Figure 3**  
**Uncertainty in Reported Values**

Standard Industrial Hygiene sampling protocols require that the Industrial Hygienist consider this degree of uncertainty, known as the total coefficient of variation ( $Cv_T$ ), for each method. The  $Cv_T$  includes the uncertainty associated with both the sampling and analytical processes. For many methods, such as this analysis method, the degree of analytical uncertainty is known and published, and is generally small. However, for field methamphetamine sampling, the statistical uncertainty is generally very large. When we analyze field data from fully characterized properties, we see that the variation of concentrations from the building as a whole usually exhibits a lognormal distribution. As such, geometric standard deviations can be as large as 3.0. This distribution is similar to that reported elsewhere.<sup>15, 16</sup>

Standard Industrial Hygiene protocols typically use the 95% confidence intervals to determine the possible “spread” of the laboratory results about the true value. As such, where the  $Cv_T$  is known, the IH calculates the UCL and LCL and determines if the UCL is greater than or less than the Decision Threshold.

In this case, there were too few samples analyzed to confidently determine the confidence interval or the distribution.

<sup>15</sup> Washington State Department of Health: *Summary Results from a Pilot Study to Evaluate Variability and Distribution of Methamphetamine Residue in Remediated Residential Illegal Drug Labs*, as reported in NIOSH Method 9106 (DRAFT)

<sup>16</sup> Martyny JW, Arbuckle SL, McCammon CS, Esswein EJ, Erb N, *Chemical Exposures Associated with Clandestine Methamphetamine Laboratories*, ([http://www.njc.org/pdf/chemical\\_exposures.pdf](http://www.njc.org/pdf/chemical_exposures.pdf) , May 10, 2004).



In addition to sampling error, all samples exhibit analysis error. In this case, the samples exhibited slight “bias.” That is to say the analysis QA/QC indicated that there was a systematic bias incorporated in the analysis, wherein sample spike recoveries were low. As such, the samples probably contained more methamphetamine than was being reported in the final laboratory report.

Due to the random sampling error and the random and systematic analytical error, we are confident that although UM051210-21 was numerically below the regulatory threshold, in the totality of the circumstances, if the UCL95 were calculated, the sample result would be greater than the regulatory threshold. In the table below we have presented the results of the sampling and analysis:

Sample ID	Location	Sample Result µg/100cm <sup>2</sup>
UM051210-1	Dining room tops of light shades	0.04
UM051210-2	Kitchen extraction fan interior	ARCHIVED
UM051210-3	Patio top of freezer in corner	
UM051210-4	Back hall tops of door jambs	
UM051210-5	Upstairs west bedroom top of ceiling light	
UM051210-6	Upstairs NW Bedroom , top of top shelf in closet	
UM051210-7	Upstairs NE Bedroom, NE Corner of N wall at ceiling	
UM051210-8	Upstairs Bathroom, medicine chest	
UM051210-9	Recreation room top of pool table light	
UM051210-10	Downstairs NW Bedroom, NW corner of floor	
UM051210-11	Furnace room top of duct south end	
UM051210-12	Downstairs Bath sewer pipe	
UM051210-13	Downstairs south Shop top of duct	
UM051210-14	Field Blank	
UM051210-15	Downstairs NE Bedroom top shelf in S closet	
UM051210-16	Attic ventilation assembly near access	
UM051210-17	Furnace interior at living room return grille	2.8
UM051210-18	Field Blank	ARCHIVED
UM051210-19	Shed light fixture	
UM051210-20	Garage top of light fixture E side	3.3
UM051210-21	Master bath light fixture	0.4

**Table 3**  
**Results of Preliminary Methamphetamine Wipe Samples**

Therefore, based on the *totality of the circumstances*, FACTs concluded that there is insufficient evidence to support the initial hypothesis that the interior areas were compliant.

Pursuant to state regulations, “Decontamination” means “...*the process of reducing the level of contamination to the lowest practical level using currently available methods. At a*



*minimum, decontamination must reduce contamination of specified substances below the concentrations allowed by this regulation.”*

## **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.

### **Data Set**

MDL was 0.004 µg; LOQ was 0.03 µg; MBX <MDL; LCS 4.0 µg (RPD <1%, recovery =100%); Matrix spike 0.020 µg (RPD 9.5%; recovery 110%); Matrix spike Dup 0.020 µg; (RPD 9.5%; recovery 110%); Surrogate recovery: High 103% (Sample 21), Low 92% (Sample1); FACTs reagents: MeOH lot #A0901 <MDL for n=8; Gauze lot 1003; no data (new lot where n=2).<sup>17</sup> The QA/QC indicate the data met the data quality objectives; and the results exhibit slight negative bias.

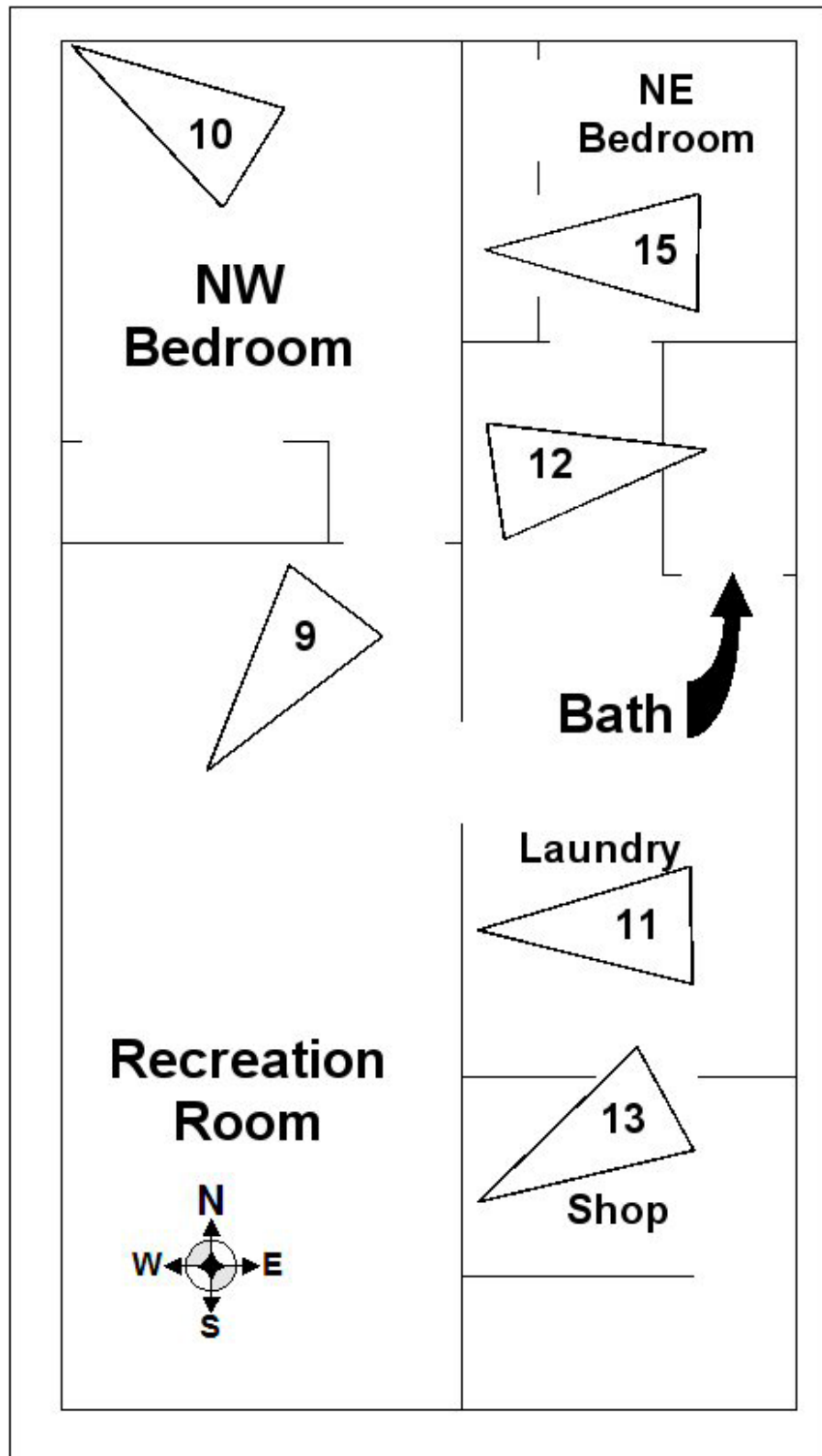
### **Sample Locations**

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

---

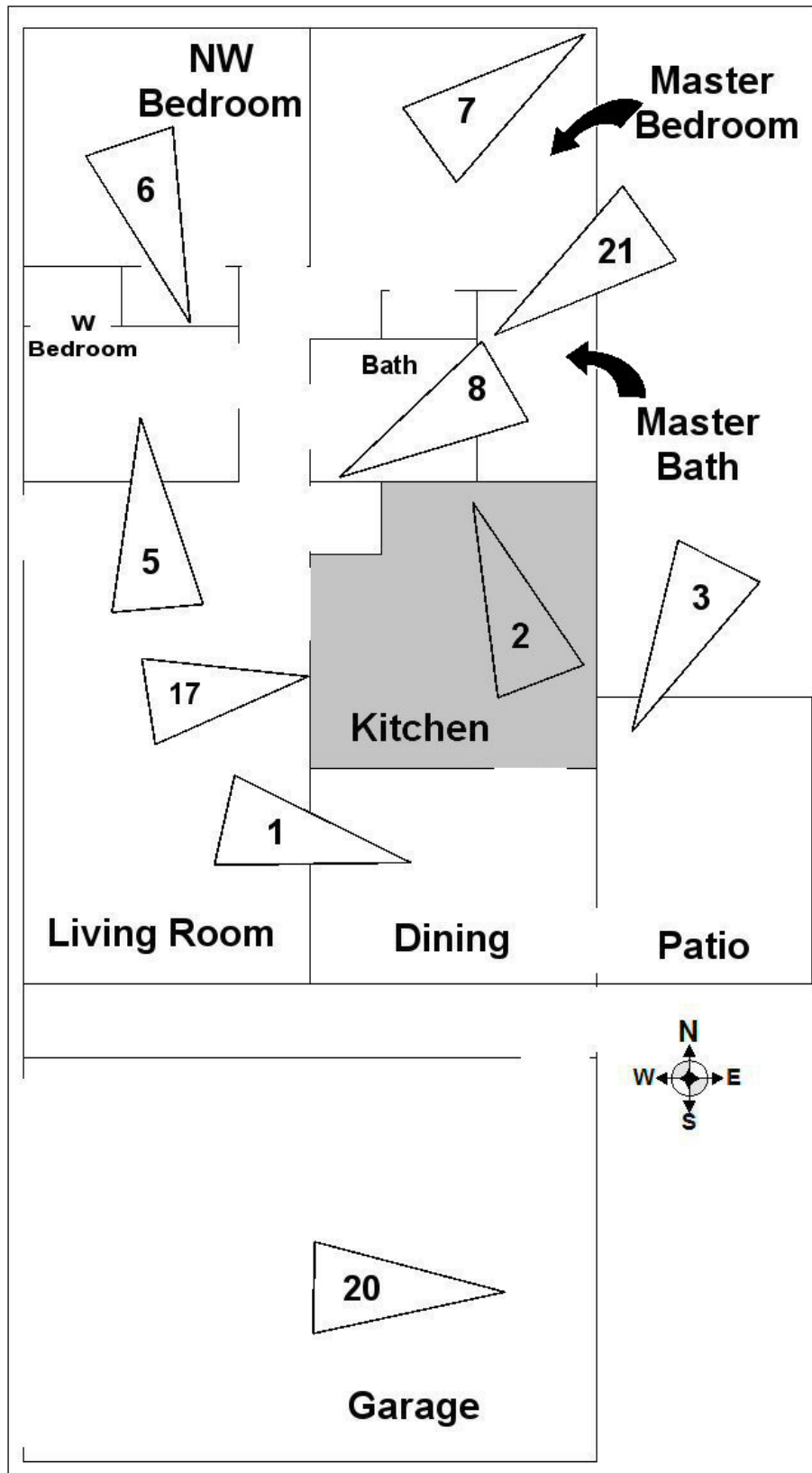
<sup>17</sup> The previous box of gauze was <MDL for n=5.





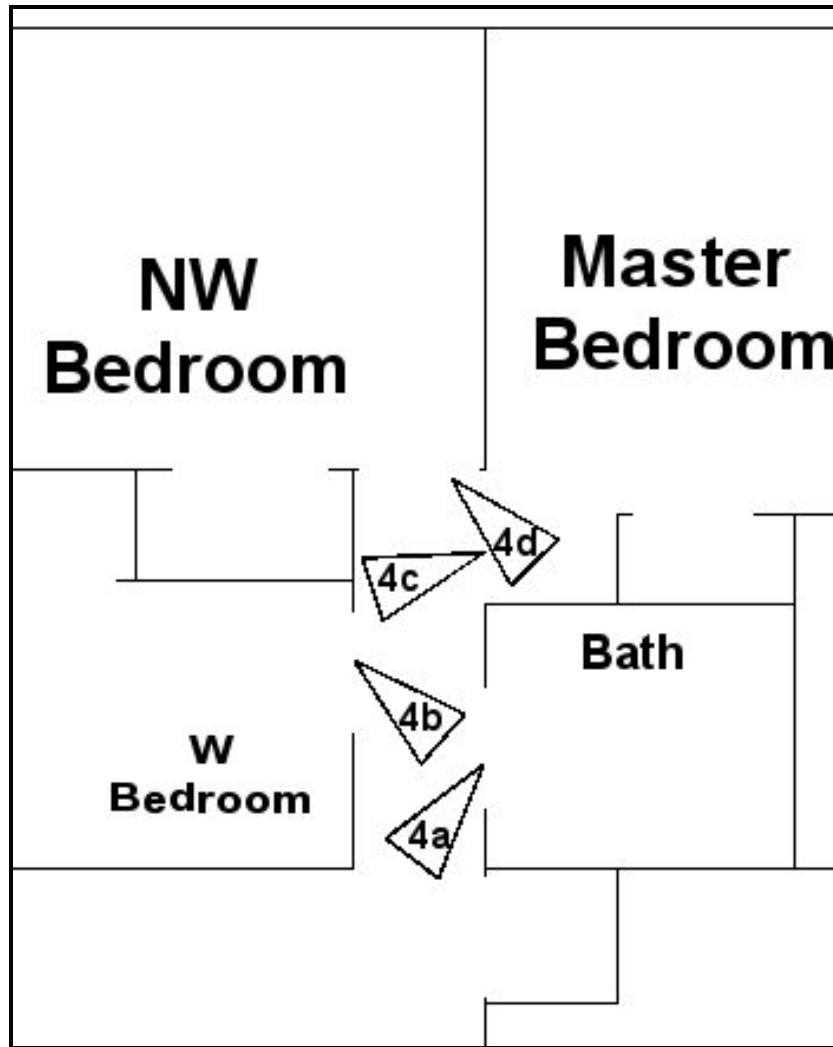
**Figure 2**  
**Initial Sample Locations in Basement**





**Figure 3**  
**Initial Sample Locations Main Floor**

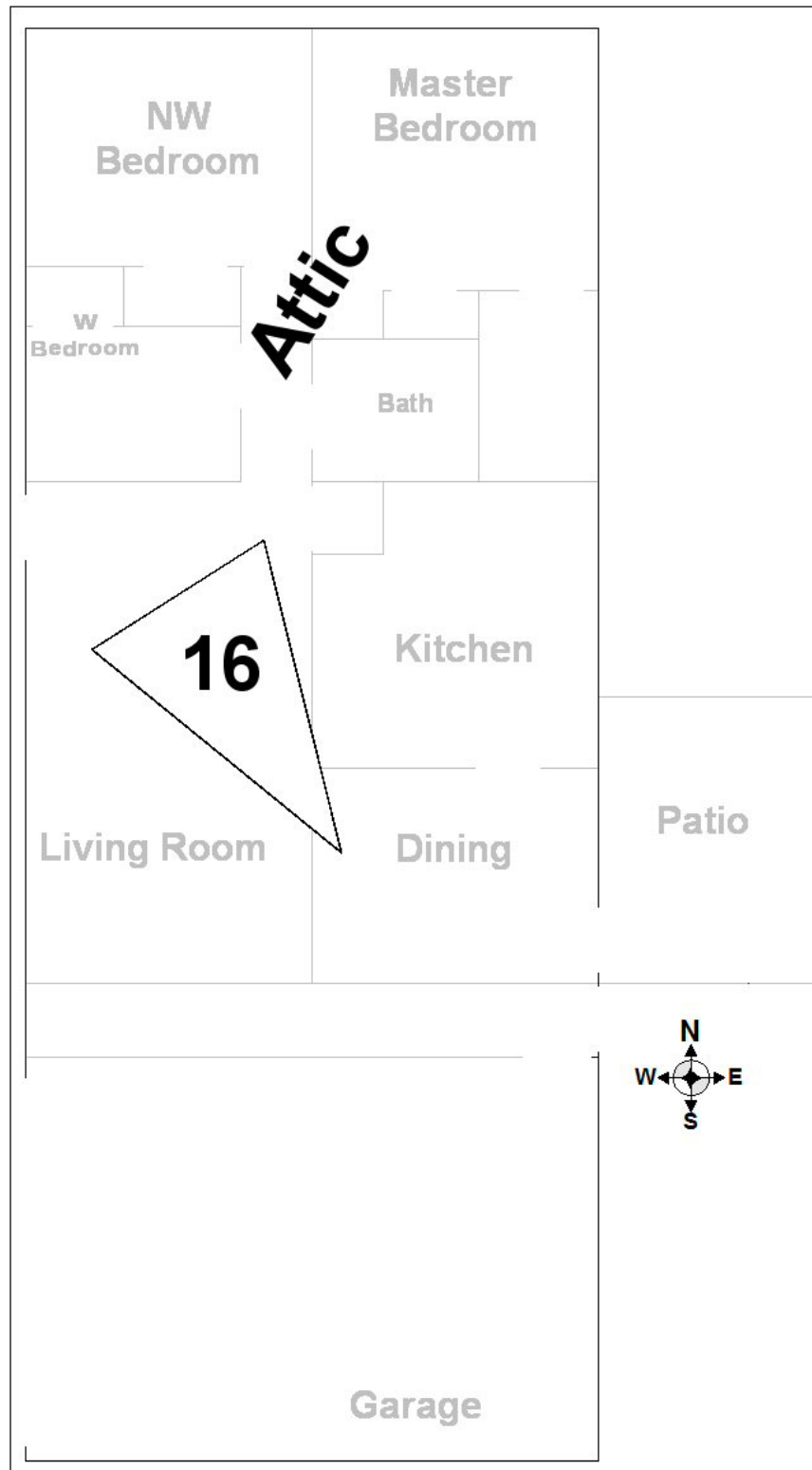




**Figure 4**  
**Initial Sample Locations Main Floor Back Hall**

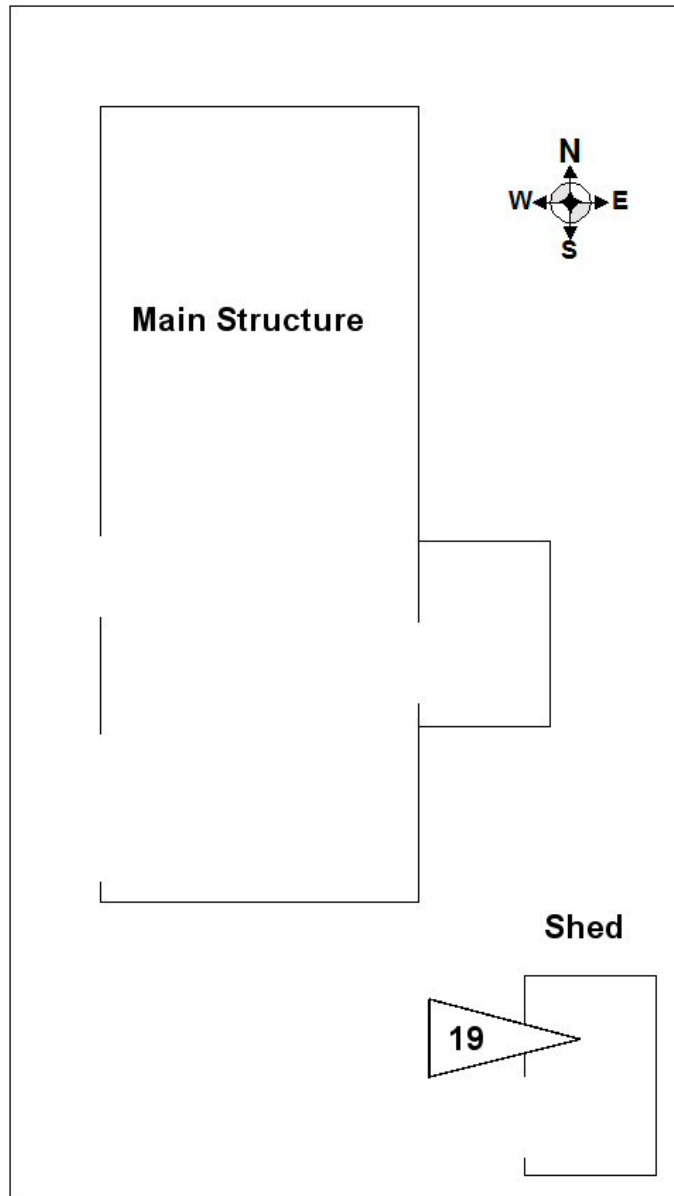






**Figure 5**  
**Initial Sample Locations Attic**





**Figure 6**  
**Initial Sample Location: Shed**

### ***Conclusions***

Based on the totality of the circumstances, including our subjective observations and objective data from sampling, we found that there is insufficient evidence to support the preliminary hypothesis and we accepted the null hypothesis and concluded that methamphetamine contamination at concentrations in excess of the regulatory threshold exists in both structures.



## RECOMMENDATIONS

Based on our observations, and laboratory results, we recommend standard industry practices for decontamination to 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 of the subject property.

### ***Universal Site Requirements***

1. An on-site storage container should be established on the grounds (such as a poly lined and covered roll on-roll off container (ro-ro) or temporary trailer).
2. The on-site container shall be secured with a padlock at all times when not immediately manned by remediation personnel.
3. 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*.
4. We recommend the decontamination process be conducted in Level C PPE ensembles with a minimum of half-face APRs or PAPRs.
5. We recommend that a decontamination corridor with showers be established initially at the back door.
6. All remediation work performed at the residence should be conducted under written contract with a reputable remediation company qualified to perform the work.
7. All work performed at the residence should be conducted with open communication and cooperation with the Lakewood Police Department, the Jefferson County Sheriff's Office, and the Jefferson County Department of Health and Environment.
8. Discovery of any controlled substances shall be immediately reported to the Jefferson County Sheriff's Office.
9. Discovery of any contraband shall be immediately reported to the Jefferson County Sheriff's Office.



10. All remediation work should be presumed to be pursuant to Title 29 of the Code of Federal Regulations, §1910.120 until otherwise indicated.
11. The contractor *shall* 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 a failed final clearance(s).
15. State regulations prohibit 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 shall 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 shall 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  $0.25 \mu\text{g}/100 \text{ cm}^2$ , the contractor shall be contractually obligated to continue to clean, and sample, until the elevated concentrations are not observed.
18. Once the contractor's samples indicate the contamination has been sufficiently reduced, the Industrial Hygienist shall perform final clearance sampling according to 6-CCR 1014-3.

### ***Decontamination of The Residence***

In general, decontamination of a forced air furnace system can be difficult, and often impossible. The contractor may propose removal of the furnace and associated ductwork, *in toto*, or may propose cleaning, and decontamination of the ventilation system. If the furnace system is left in place, final clearance sampling will include at least two locations of the furnace duct interiors.



The following decontamination process should take place in this order:

1. Establish negative pressure pursuant to State regulations.
2. The contractor shall be required to monitor the negative pressure at all times and ensure that the negative pressure (pressure differential) between the work area and adjoining properties, is not less than 0.02 inches of water column at all times.
3. Exhaust from the negative enclosure may take place at any exterior location.
4. No work, except as needed to establish critical barriers shall begin until negative pressure is established.
5. Negative pressure must be maintained at all times until final sampling has been completed and the written intent to issue a Decision Statement has been issued to the contractor by the consulting Industrial Hygienist.
6. The contractor should establish a standard, two-chambered decon and/or bag-out/load-out at the back, sliding glass door.
7. Window coverings (window blinds) should be discarded.
8. All large household appliances (dishwasher, refrigerator, large screen TV, etc) shall be wiped down and salvaged.
9. All bathroom exhaust fans and the kitchen exhaust fan shall be removed from their housing, and thoroughly cleaned.
10. The entire contents of the attic, including all insulation shall be removed and discarded. All surfaces in the attic shall be vacuumed and wiped down in a normal fashion.
11. Carpeting and associated padding should be removed and discarded.
12. All surfaces in the entire interior space (including the attic), including all ceilings, all hanging fixtures, all cabinets (interior and exterior surfaces), all shelving, all floors, doors, hinges, bathtubs, sinks, appliances (interior and exterior surfaces), and every other interior surface whether specifically mentioned or not, shall be thoroughly wiped down to remove residual contamination.

### ***Compliance for the Shed***

1. The shed and all of its contents may be simply dismantled and discarded. If the shed is not demolished, the following procedures are to be followed:



- A. Negative pressure shall be established in the shed and maintained at all times. The contractor is permitted to use a common ducting system to establish negative pressure in both structures.
- B. All remaining personal belongings in the shed should be bagged and taken directly to the roll-on, roll-off. If the contractor identifies particularly valuable items that may be salvaged, the contractor shall contact the property owner to discuss the feasibility of salvage.
- C. Following the removal of interior contents, all surfaces in the entire interior space including the ceiling, floor, doors, hinges, and every other interior surface whether specifically mentioned or not, should be thoroughly wiped down to remove residual methamphetamine contamination.

Enclosures: One CD; Data package, and Appendices



## **APPENDIX A**

### **SUPPORTING DOCUMENTS**



**FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.  
CLANDESTINE METHAMPHETAMINE LABORATORY  
ASSESSMENT FIELD FORMS®**

<b>FACTs project name: Upham St.</b>		<b>Form # ML1</b>
<b>Date: May 12, 2010</b>		
<b>Reporting IH:</b>	<b>Caoimhin P. Connell, Forensic IH</b>	

**PROPERTY DESCRIPTION:**

Physical address	1040 S. Upham St., Lakewood, CO 80226		
Legal description or VIN	Schedule: 059850, Parcel ID: 49-144-07-003, Neighborhood: 3011 (Sun Valley Estates) Block 004, Lot 0014, Section 14, Township 4, Range 69		
Registered Property Owner	Steven L Sodia 1040 S. Upham St., Lakewood, CO 80226		
Number of structures	<b>TWO</b>		
Type of Structures (Each affected structure will need a "Functional Space" inventory)	1: Main structure	2,528	Square feet
	2: Shed	150	Square feet
Adjacent and/ or surrounding properties	North: Single family residential structure South: Single family residential structure East: Single family residential structure West: Street front (Upham Street)		
General Property Observations	<b>Built 1959, renovated 1961, fair condition, empty unoccupied</b>		
Production Method	<b>Hypophosphorous pseudoephedrine reduction</b>		



**PLUMBING INSPECTION AND INVENTORY**

<b>FACTs project name: Upham St.</b>	<b>Form # ML2</b>
<b>Date: May 12, 2010</b>	
<b>Reporting IH:</b>	<b>Caoimhin P. Connell, Forensic IH</b>

Functional Space	Room	Fixture	Indicia?	Comments
8	Bathroom # 1	Shower	N	Corrosion on door hinges
8	Bathroom # 1	Sink 1	N	
8	Bathroom # 1	Toilet	N	
7	Bathroom # 2	Shower	N	No comments
7	Bathroom # 2	Sink 1	N	
7	Bathroom # 2	Toilet	N	
12	Bathroom # 3	Shower	N	No comments
12	Bathroom # 3	Sink 1	N	
12	Bathroom # 3	Toilet	N	
2	Kitchen	Dishwasher	N	No comments
2	Kitchen	Sink #1	N	
2	Kitchen	Sink #2	N	
11	Laundry Room	Slop sink	NA	
11	Laundry Room	Washing machine	NA	

**VENTILATION INSPECTION AND INVENTORY**

Item	Y/N	Comments
Isolated AHU?	Y	No comments
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?	N	
Active returns to other properties?	N	
Passive wall grilles to other properties?	N	
Industrial ventilation?	N	
Residential ventilation?	Y	
Pressurized structure?	N	



**FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.**

**FUNCTIONAL SPACE INVENTORY**

<b>FACTs project name: Upham St.</b>	<b>Form # ML3</b>
<b>Date: May 12, 2010</b>	
<b>Reporting IH:</b>	<b>Caoimhin P. Connell, Forensic IH</b>

Structure Number	Functional Space Number	Describe the functional space (See drawings for delineating structural features )
1	1	Living Room and contiguous Dining Room
1	2	Kitchen
1	3	Patio
1	4	Back hallway with two linen closets
1	5	Upstairs west Bedroom
1	6	Upstairs northwest Bedroom
1	7	Upstairs northeast Bedroom (Master) and Bathroom <i>en suite</i>
1	8	Upstairs Bathroom
1	9	Downstairs Recreation Room
1	10	Downstairs northwest Bedroom
1	11	Downstairs Furnace Room
1	12	Downstairs Bathroom
1	13	Downstairs South Shop and area under the stairs
1	14	Downstairs northeast Bedroom
1	15	Furnace System
1	16	Attic
1	17	Garage
2	1	Exterior shed



**LAW ENFORCEMENT DOCUMENTATION**

<b>FACTs project name: Upham St.</b>		<b>Form # ML4</b>
<b>Date: May 12, 2010</b>		
<b>Reporting IH:</b>	<b>Caoimhin P. Connell, Forensic IH</b>	

Inventory of Reviewed Documents	1: WMDTF Posting See body of text for additional information
Described method(s) of production	Pseudoephedrine reduction via hypophosphorous
Chemicals identified by the LEA as being present	Methamphetamine Explosives Flammable Compressed gases Flammables
Cooking areas identified	Shed Kitchen
Chemical storage areas identified	No longer available
LE Observation on areas of contamination or waste disposal	No longer available





**FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.**

May7, 2010

Jefferson County Sheriff's Office  
Records Division  
200 Jefferson County Parkway  
Golden, CO 80401

Via Fax: 303-271-5552

Dear Records:

Forensic Applications, Inc. has been contracted to perform a "Preliminary Assessment" an illegal clandestine drug lab pursuant to Colorado Board Of Health Regulations 6-CCR-1014-3, and CRS §25-18.5-101 *et seq.* The property is located in the City of Lakewood at:

**1040 S. Upham St., Lakewood, CO 80226**

As you are aware, as part of that assessment, the Industrial Hygienist is required by regulation (6-CCR-1014-3 (§4.2)) to review available Law Enforcement documents associated with the property. Generally, we initially do not require copies of any documents; and, if preferable, we can visit the records offices and review available information there.

We would like to review any narratives regarding controlled substances or hazardous materials responses, or speak with any Law Enforcement personnel who may be familiar with the property. We are only interested in issues involving controlled substances or hazardous materials responses in the last five years. If no such records are available please let us know and we will merely make that notation in our report to the Jefferson County Department of Health.

We will be performing the on-site assessment on May 12, 2010, and will need to review any available documents before then. We apologize for the short notice, however, we generally do not have any control over the timeframes involved.

Forensic Applications takes extreme caution to protect all Law Enforcement Sensitive information. When requested by the Law Enforcement Agency, we do NOT reveal names, document identities, or include any information considered sensitive by an investigating agency. We have developed a close working relationship with JCSO in the past, and we value the close working relationship you have extended on other properties. I have included my SOQ. Please feel free to call me directly with any comments or questions.

Pursuant to CRS §24-72-305.5, I affirm that upon receipt of requested records of official actions and/or criminal justice records from the JCSO, such records shall not be used for the direct solicitation of business for pecuniary gain.

Sincerely,

Caoimhín P. Connell  
Forensic Industrial Hygienist



**TED MINK**  
Sheriff

200 Jefferson County Parkway  
Golden, Colorado 80401-2697  
www.jeffcosheriff.com

**RAY FLEER**  
Undersheriff

## FAX COVER SHEET

Date: 5-7-10 Total Number of Pages: 3

Deliver To: CAOIMHIN P CONNELL Phone#: 303 903-7494 Fax#: 303 568-0489  
FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, LLC

From: LYNN - RECORDS Phone#: 303 271-5545 Fax#: \_\_\_\_\_

Item Description: REQUEST FOR CONTROLLED SUBSTANCE OR HAZ MAT  
1040 S. UPHAM ST

### DIVISION/UNIT FAX NUMBERS

**EXECUTIVE ADMINISTRATION**.....303-271-5307  
 Public Information Officer .....303-271-5668

**SUPPORT SERVICES DIVISION**.....303-271-5318

Accreditation/Staff Inspection ..... 303-271-5180  
 Ancillary Services ..... 303-271-5352  
 Asset Management ..... 303-271-5318  
 Building Maintenance ..... 303-271-5585  
 Business Office ..... 303-271-5357  
 Civil ..... 303-271-6593  
 Communications/Dispatch ..... 303-271-5529  
 Counseling ..... 303-271-5356  
 Evidence Vault ..... 303-271-5552

Fleet ..... 303-271-5374  
 Fugitive ..... 303-271-6593  
 Internal Affairs ..... 303-271-5317  
 Professional Standards ..... 303-271-5352  
 Radio Maintenance ..... 303-271-5375  
 Records ..... 303-271-5552  
 Recruiting/Training ..... 303-271-5352  
 Supply ..... 303-271-5343  
 Warrants ..... 303-271-6473

**DETENTION SERVICES DIVISION**.....303-271-5403

Accounting ..... 303-271-5468  
 Booking ..... 303-271-5561  
 Medical ..... 303-271-5432

Transportation ..... 303-271-5454  
 Work Release ..... 303-271-5155

**CRIMINAL INVESTIGATIONS DIVISION**.....303-271-5600

Criminalistics/Lab ..... 303-271-5696  
 Intelligence ..... 303-987-7155  
 Property ..... 720-377-2029

Victim Services ..... 303-271-5598  
 West Metro Drug Task Force ..... 303-423-2310

**PATROL DIVISION (Administration)**.....303-271-5500

Patrol Operations (Mountain) ..... 303-674-6488  
 Patrol Operations (North) ..... 303-271-5145  
 Patrol Operations (South) ..... 720-377-2028

Critical Incident Response ..... 303-271-4905  
 Animal Control ..... 303-271-5075

**FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.**

May 7, 2010

Jefferson County Sheriff's Office  
Records Division  
200 Jefferson County Parkway  
Golden, CO 80401

Via Fax: 303-271-5552

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Sincerely,

Caoimhin P. Connell  
Forensic Industrial Hygienist

**NO RECORD**

Jefferson County Sheriff's Office  
Records Section  
200 Jefferson County Parkway  
Golden, CO 80401



Jefferson County Sheriff's Office  
Calls for Service to: 1040 S Upham St  
5/7/2005 - 5/7/2010

<u>Date</u>	<u>Event Number</u>	<u>Report Number</u>	<u>Apt</u>	<u>Bldg</u>	<u>Incident Type Description</u>	<u>Disposition</u>
-------------	---------------------	----------------------	------------	-------------	----------------------------------	--------------------

\*\*\* End of Report \*\*\*

Search includes all calls to the street address indicated. Apt# and Bldg# are provided when available, however, this data is not always captured at the time a call is dispatched.

**NO RECORD**

NOTE: THIS ADDRESS IS IN LAKEWOOD P.D.'S JURISDICTION

*J. Wilson*



**FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.**

May7, 2010

Lakewood Police Department  
Records  
City of Lakewood  
480 S. Allison Pkwy,  
Lakewood, CO 80226

1040 S. Upham St., Lakewood, CO 80226  
Via Fax: 303-987-7359

Dear Records:

Forensic Applications, Inc. has been contracted to perform a "Preliminary Assessment" an illegal clandestine drug lab pursuant to Colorado Board Of Health Regulations 6-CCR-1014-3, and CRS §25-18.5-101 *et seq.* The property is located in the City of Lakewood at:

**1040 S. Upham St., Lakewood, CO 80226**

As you are aware, as part of that assessment, the Industrial Hygienist is required by regulation (6-CCR-1014-3 (§4.2)) to review available Law Enforcement documents associated with the property. Generally, we initially do not require copies of any documents; and, if preferable, we can visit the records offices and review available information there.

We would like to review any narratives regarding controlled substances or hazardous materials responses, or speak with any Law Enforcement personnel who may be familiar with the property. We are only interested in issues involving controlled substances or hazardous materials responses in the last five years. If no such records are available please let us know and we will merely make that notation in our report to the Jefferson County Department of Health.

We will be performing the on-site assessment on May 12, 2010, and will need to review any available documents before then. We apologize for the short notice, however, we generally do not have any control over the timeframes involved.

Forensic Applications takes extreme caution to protect all Law Enforcement Sensitive information. When requested by the Law Enforcement Agency, we do NOT reveal names, document identities, or include any information considered sensitive by an investigating agency. We have developed a close working relationship with Lakewood Police Department in the past, and we value the close working relationship you have extended on other properties. I have included my SOQ. Please feel free to call me directly with any comments or questions.

Pursuant to CRS §24-72-305.5, I affirm that upon receipt of requested records of official actions and/or criminal justice records from the Lakewood Police Department, such records shall not be used for the direct solicitation of business for pecuniary gain.

Sincerely,

Caoimhín P. Connell  
Forensic Industrial Hygienist



Dear Caoimhín P. Connell,

**Re: Lakewood PD, LE Request**

The 3 page fax you sent through eFax.com to 13039877359 was successfully transmitted at 2010-05-07 19:41:40 (GMT).

The length of transmission was 135 seconds.

The receiving machine's fax ID: 3039877359.

Best Regards,

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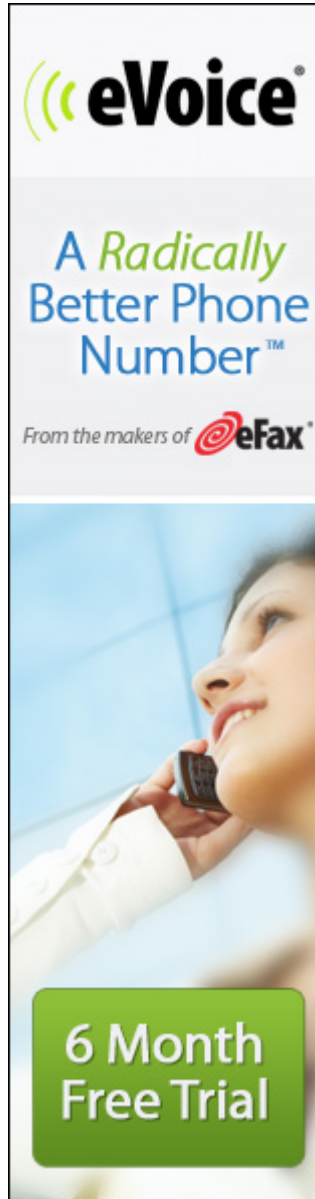
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**FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.**

May7, 2010

Lt. William Blackburn  
West Metro Drug Task Force  
PO Box 16053  
Golden CO, 80402

1040 S. Upham St., Lakewood, CO 80226

Via Fax: 303-423-2310

Dear Lt. Blackburn:

Forensic Applications, Inc. has been contracted to perform a "Preliminary Assessment" an illegal clandestine drug lab pursuant to Colorado Board Of Health Regulations 6-CCR-1014-3, and CRS §25-18.5-101 *et seq.* The property is located in the City of Lakewood at:

**1040 S. Upham St., Lakewood, CO 80226**

As you are aware, as part of that assessment, the Industrial Hygienist is required by regulation (6-CCR-1014-3 (§4.2)) to review available Law Enforcement documents associated with the property. Generally, we initially do not require copies of any documents; and, if preferable, we can visit the records offices and review available information there.

We would like to review any narratives regarding controlled substances or hazardous materials responses, or speak with any Law Enforcement personnel who may be familiar with the property. We are only interested in issues involving controlled substances or hazardous materials responses in the last five years. If no such records are available please let us know and we will merely make that notation in our report to the Jefferson County Department of Health.

We will be performing the on-site assessment on May 12, 2010, and will need to review any available documents before then. We apologize for the short notice, however, we generally do not have any control over the timeframes involved.

Forensic Applications takes extreme caution to protect all Law Enforcement Sensitive information. When requested by the Law Enforcement Agency, we do NOT reveal names, document identities, or include any information considered sensitive by an investigating agency. We have developed a close working relationship with WMTF and JCSO in the past, and we value the close working relationship you have extended on other properties. I have included my SOQ. Please feel free to call me directly with any comments or questions.

Pursuant to CRS §24-72-305.5, I affirm that upon receipt of requested records of official actions and/or criminal justice records from the WMTF, such records shall not be used for the direct solicitation of business for pecuniary gain.

Sincerely,

Caoimhín P. Connell  
Forensic Industrial Hygienist

Dear Caoimhín P. Connell,

**Re: WMTF - LE Request**

The 3 page fax you sent through eFax.com to 13034232310 was successfully transmitted at 2010-05-07 19:41:00 (GMT).

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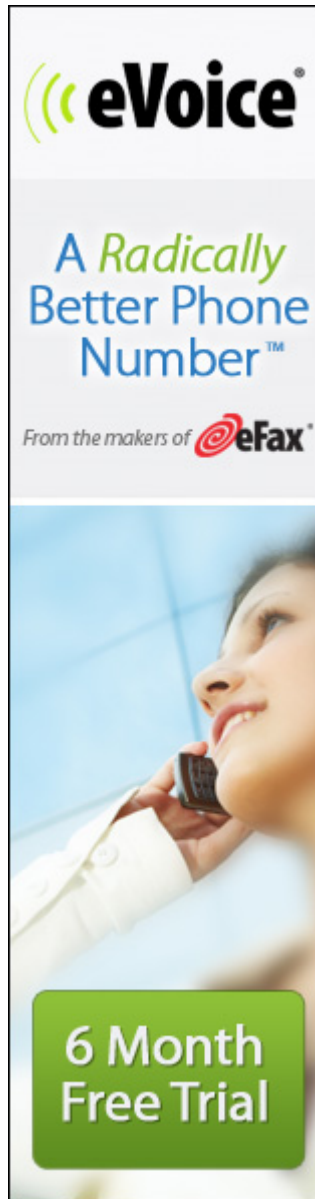
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**FIELD OBSERVATIONS**

<b>FACTs project name: Upham St.</b>		<b>Form # ML5</b>
<b>Date: May 12, 2010</b>		
<b>Reporting IH:</b>	<b>Caoimhin P. Connell, Forensic IH</b>	

**Structure: One**

Indicator	Functional Space	Indicator	Functional Space
Acids	No Comment	Lithium	No Comment
Aerosol cans	No Comment	Marijuana	No Comment
Alcohols (MeOH, EtOH)	No Comment	Match components	No Comment
Ammonia	No Comment	Mercury	No Comment
Ammunition	No Comment	Methamphetamine	All Areas
Artistic expressions	3,14	Modified coolers	No Comment
Bases	No Comment	Modified electrical	1,9
Basters/Pipettes	No Comment	Modified ventilation	No Comment
Batteries	No Comment	Needles/Syringes	No Comment
Bi-phasic wastes	No Comment	OTC drugs	No Comment
Booby traps	No Comment	OTC Containers	No Comment
Bullet holes	No Comment	pH papers/indicators	No Comment
Burn marks	No Comment	Phenyl-2-propanone	No Comment
Chemical storage	No Comment	Pornography, Sex toys	No Comment
Colored wastes	No Comment	Prescription drugs	No Comment
Corrosion on surfaces	8	Presence of cats	No Comment
Delaminating paint	No Comment	(Pseudo)ephedrine	No Comment
Drug paraphernalia	No Comment	Red P	No Comment
Electrical modifications	No Comment	Red Staining	No Comment
Faeces	No Comment	Salt or Salters	No Comment
Filters	No Comment	Security devices	1,9,10
Forced entry marks	No Comment	Smoke detectors disabled	11
Gang markings	No Comment	Solvents (organic)	No Comment
Gas cylinders	No Comment	Squalor	No Comment
Gerry cans	No Comment	Staining on walls or ceiling	1, 2,3,5,7,11,13
Glassware	No Comment	Staining on floors	2,3,4,5,9,10,14
Graffiti	No Comment	Stash holes	5
Heating mantle	No Comment	Structural damage/modifications	1,4①,5,6,13
Heet or similar	No Comment	Tubing	No Comment
Hydrogen peroxide	No Comment	Urine containers	No Comment
Iodine	No Comment	Weapons	No Comment
Kitty litter	No Comment	Window block material	No Comment
Lead	No Comment	Yellow staining	4,5, 7,8,13,14

**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



**FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.**

**FIELD OBSERVATIONS**

<b>FACTs project name: Upham St.</b>		<b>Form # ML5</b>
<b>Date: May 12, 2010</b>		
<b>Reporting IH:</b>	<b>Caoimhin P. Connell, Forensic IH</b>	

**Structure: Two**

Indicator	Functional Space	Indicator	Functional Space
Acids	No Comment	Lithium	No Comment
Aerosol cans	No Comment	Marijuana	No Comment
Alcohols (MeOH, EtOH)	No Comment	Match components	No Comment
Ammonia	No Comment	Mercury	No Comment
Ammunition	No Comment	Methamphetamine	1
Artistic expressions	No Comment	Modified coolers	No Comment
Bases	No Comment	Modified electrical	No Comment
Basters/Pipettes	No Comment	Modified ventilation	No Comment
Batteries	No Comment	Needles/Syringes	No Comment
Bi-phasic wastes	No Comment	OTC drugs	No Comment
Booby traps	No Comment	OTC Containers	No Comment
Bullet holes	No Comment	pH papers/indicators	No Comment
Burn marks	No Comment	Phenyl-2-propanone	No Comment
Chemical storage	1①	Pornography, Sex toys	No Comment
Colored wastes	No Comment	Prescription drugs	No Comment
Corrosion on surfaces	No Comment	Presence of cats	No Comment
Delaminating paint	No Comment	(Pseudo)ephedrine	No Comment
Drug paraphernalia	No Comment	Red P	No Comment
Electrical modifications	No Comment	Red Staining	No Comment
Faeces	No Comment	Salt or Salters	No Comment
Filters	No Comment	Security devices	No Comment
Forced entry marks	No Comment	Smoke detectors disabled	No Comment
Gang markings	No Comment	Solvents (organic)	No Comment
Gas cylinders	No Comment	Squalor	No Comment
Gerry cans	No Comment	Staining on floors	No Comment
Glassware	1①	Staining on walls or ceiling	No Comment
Graffiti	No Comment	Stash holes	No Comment
Heating mantle	No Comment	Structural damage/modifications	No Comment
Heet or similar	No Comment	Tubing	No Comment
Hydrogen peroxide	No Comment	Urine containers	No Comment
Iodine	No Comment	Weapons	No Comment
Kitty litter	No Comment	Window block material	No Comment
Lead	No Comment	Yellow staining	No Comment

**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

<b>FACTs project name: Upham St.</b>		<b>Form # ML7</b>
<b>Date: May 12, 2010</b>		
<b>Reporting IH:</b>	<b>Caoimhin P. Connell, Forensic IH</b>	

	Yes/No	NA	N/C
Does the property have an ISDS	N		
Is there unusual staining around internal drains	N		
Are solvent odors present from the internal drains	N		
Is there evidence of wastes being disposed down internal drains	N		
Are solvent odors present from the external sewer drain stacks			X
Was the septic tank lid(s) accessible		X	
Was the leach field line accessible		X	
Was the septic tank or leach field lines opened		X	
Are solvent odors present from the leach field lines (if "yes" see below)		X	
Are solvent odors present from the septic tank (if "yes" see below)		X	
Is "slick" present in the septic tank		X	
Are biphasic (aqueous-organic) layers present in the septic tank		X	
Was pH measured in the septic tank (pH =7 to 8)		X	
Were organic vapors measured in the septic tank (if "yes" see below)		X	
Is sampling of the ISDS warranted		X	
Were calawasi/drum thief samples collected from the septic tank		X	

\*NC = Not checked

## Qualitative Organic Vapor Monitoring

Hydrocarbon detector model	EnMet Target Series, MOS detector
This section is blank	

Location	MOS*	PID*	FID*
This section is blank			

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

## Notes

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**FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.**

# PRE-REMEDIATION PHOTOGRAPH LOG SHEET

<b>FACTs project name: Upham St.</b>		<b>Form # ML8</b>
<b>Date: May 12, 2010</b>		
<b>Reporting IH:</b>	<b>Caoimhin P. Connell, Forensic IH</b>	

Name ^	Date taken	Name ^	Date taken
Attic	5/12/2010 16:15	Exterior	5/12/2010 13:14
Attic (2)	5/12/2010 16:15	Exterior (2)	5/12/2010 13:14
Attic (3)	5/12/2010 16:15	Exterior (3)	5/12/2010 13:15
Attic (4)	5/12/2010 16:15	Exterior (4)	5/12/2010 13:15
Attic (5)	5/12/2010 16:15	Exterior (5)	5/12/2010 13:16
Attic (6)	5/12/2010 16:15	Exterior (6)	5/12/2010 13:16
Back hall	5/12/2010 11:54	Exterior (7)	5/12/2010 13:16
Back hall (2)	5/12/2010 11:54	Exterior (8)	5/12/2010 16:26
Back hall (3)	5/12/2010 11:54	Exterior (9)	5/12/2010 16:26
DS Bath	5/12/2010 13:12	Exterior (10)	5/12/2010 16:27
DS Bath (2)	5/12/2010 13:12	Exterior (11)	5/12/2010 16:27
DS NE Bedroom	5/12/2010 13:12	Exterior (12)	5/12/2010 16:27
DS NE Bedroom (2)	5/12/2010 13:12	Exterior (13)	5/12/2010 16:27
DS NE Bedroom (3)	5/12/2010 13:13	Exterior (14)	5/12/2010 16:28
DS NE Bedroom (4)	5/12/2010 13:13	Garage	5/12/2010 13:15
DS NE Bedroom (5)	5/12/2010 13:13	Garage (2)	5/12/2010 13:15
DS NW Bedroom	5/12/2010 13:10	Garage (3)	5/12/2010 13:15
DS NW Bedroom (2)	5/12/2010 13:11	Hall Bath	5/12/2010 11:54
DS NW Bedroom (3)	5/12/2010 13:11	Kitchen	5/12/2010 11:57
DS NW Bedroom (4)	5/12/2010 13:11	Kitchen (2)	5/12/2010 11:57
DS S Shop	5/12/2010 13:11	Kitchen (3)	5/12/2010 11:57
DS S Shop (2)	5/12/2010 13:12	Kitchen (4)	5/12/2010 11:57
DS S Shop (3)	5/12/2010 13:12	Laundry room	5/12/2010 13:11
DS S Shop (4)	5/12/2010 13:12	Laundry room (2)	5/12/2010 13:11
DS S Shop (5)	5/12/2010 13:12	Laundry room (3)	5/12/2010 13:11



FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.



# PRE-REMEDIATION PHOTOGRAPH LOG SHEET

<b>FACTs project name: Upham St.</b>		<b>Form # ML8</b>
<b>Date: May 12, 2010</b>		
<b>Reporting IH:</b>	<b>Caoimhin P. Connell, Forensic IH</b>	

Name ^	Date taken	Name ^	Date taken
LE Posting	5/12/2010 14:53	Rec Room (3)	5/12/2010 13:10
LE Posting (2)	5/12/2010 14:53	Rec Room (4)	5/12/2010 13:10
Living room	5/12/2010 11:53	Rec Room (5)	5/12/2010 13:10
Living Room (2)	5/12/2010 11:57	Rec Room (6)	5/12/2010 13:37
Living room (3)	5/12/2010 11:53	Rec Room (7)	5/12/2010 13:38
Living room (4)	5/12/2010 11:53	Rec Room (8)	5/12/2010 13:38
Master bath	5/12/2010 11:56	Sample 1 (2)	5/12/2010 14:56
NE Bedroom	5/12/2010 11:55	Sample 1 (3)	5/12/2010 14:56
NE Bedroom (2)	5/12/2010 11:56	Sample 1 (4)	5/12/2010 14:57
NE Bedroom (3)	5/12/2010 11:56	Sample 1 (5)	5/12/2010 14:57
NE Bedroom (4)	5/12/2010 11:56	Sample 1 (6)	5/12/2010 14:58
NE Bedroom (5)	5/12/2010 11:56	Sample 1	5/12/2010 14:56
NE Bedroom (6)	5/12/2010 11:56	Sample 2 (2)	5/12/2010 15:01
NE Bedroom (7)	5/12/2010 11:56	Sample 2 (3)	5/12/2010 15:01
NW Bedroom	5/12/2010 11:55	Sample 2 (4)	5/12/2010 15:04
NW Bedroom (2)	5/12/2010 11:55	Sample 2 (5)	5/12/2010 15:05
NW Bedroom (3)	5/12/2010 11:55	Sample 2 (6)	5/12/2010 15:05
NW Bedroom (4)	5/12/2010 11:55	Sample 2	5/12/2010 15:01
Patio	5/12/2010 11:57	Sample 3	5/12/2010 14:53
Patio (2)	5/12/2010 11:57	Sample 4 (2)	5/12/2010 15:16
Patio (3)	5/12/2010 11:57	Sample 4	5/12/2010 15:16
Patio (4)	5/12/2010 11:57	Sample 5 (2)	5/12/2010 15:21
Patio (5)	5/12/2010 11:57	Sample 5	5/12/2010 15:19
Rec Room	5/12/2010 13:10	Sample 6 (2)	5/12/2010 15:26
Rec Room (2)	5/12/2010 13:10	Sample 6	5/12/2010 15:25



FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.



# PRE-REMEDIATION PHOTOGRAPH LOG SHEET

<b>FACTs project name: Upham St.</b>		<b>Form # ML8</b>
<b>Date: May 12, 2010</b>		
<b>Reporting IH:</b>	<b>Caoimhin P. Connell, Forensic IH</b>	

Name ^	Date taken	Name ^	Date taken
Sample 7 (2)	5/12/2010 15:30	Sample 20 (3)	5/12/2010 16:10
Sample 7 (3)	5/12/2010 15:30	Sample 20	5/12/2010 16:09
Sample 7	5/12/2010 15:30	Sample 21 (2)	5/12/2010 15:31
Sample 8 (2)	5/12/2010 15:46	Sample 21 (3)	5/12/2010 15:32
Sample 8	5/12/2010 15:46	Sample 21	5/12/2010 15:31
Sample 9 (2)	5/12/2010 14:31	Samples	5/12/2010 16:30
Sample 9 (3)	5/12/2010 14:31	Samples (2)	5/12/2010 16:30
Sample 9	5/12/2010 14:31	Samples (3)	5/12/2010 16:30
Sample 10 (2)	5/12/2010 14:33	Samples (4)	5/12/2010 16:33
Sample 10	5/12/2010 14:33	Shed	5/12/2010 13:14
Sample 11 (2)	5/12/2010 14:46	Shed (2)	5/12/2010 13:14
Sample 11	5/12/2010 14:46	Shed (3)	5/12/2010 13:14
Sample 12 (2)	5/12/2010 14:45	Shed (4)	5/12/2010 16:22
Sample 12	5/12/2010 14:44	Shed (5)	5/12/2010 16:22
Sample 13 (2)	5/12/2010 15:39	Shed (6)	5/12/2010 16:22
Sample 13 (3)	5/12/2010 15:39	Shed (7)	5/12/2010 16:26
Sample 13	5/12/2010 15:38	Stairs	5/12/2010 11:58
Sample 15 (2)	5/12/2010 14:48	Stairs (2)	5/12/2010 13:10
Sample 15	5/12/2010 14:48	Stairs (3)	5/12/2010 13:37
Sample 17 (2)	5/12/2010 15:54	Surgical gloves	5/12/2010 16:33
Sample 17	5/12/2010 15:54	Surgical gloves (2)	5/12/2010 16:33
Sample 19 (2)	5/12/2010 16:26	US Bathroom	5/12/2010 15:18
Sample 19 (3)	5/12/2010 16:26	US Bathroom (2)	5/12/2010 15:18
Sample 19	5/12/2010 16:26	US Bathroom (3)	5/12/2010 15:18
Sample 20 (2)	5/12/2010 16:09	US Bathroom (4)	5/12/2010 15:18
Name ^	Date taken		
US NE Bedroom	5/12/2010 13:22		
US NE Bedroom (2)	5/12/2010 13:23		
Walkthrough			
Walkthrough.THM			
West Bedroom	5/12/2010 11:54		
West Bedroom (2)	5/12/2010 11:54		
West Bedroom (3)	5/12/2010 11:55		





FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.

**CERTIFICATION, VARIATIONS AND SIGNATURE SHEET**

<b>FACTs project name: Upham St.</b>	<b>Form # ML14</b>
<b>Date: May 12, 2010</b>	
<b>Reporting IH:</b>	<b>Caoimhín P. Connell, Forensic IH</b>

## 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.	
<del>I do hereby certify that the property has been decontaminated in accordance with the procedures set forth in 6 CCR 1014-3, § 5.</del>	XXXXXXXXXXXXXXXXXXXXXXX
<del>I do hereby certify that I conducted post-decontamination clearance sampling in accordance with 6 CCR 1014-3, § 6.</del>	
<del>I do hereby certify that the cleanup standards established by 6 CCR 1014-3, § 7 have been met as evidenced by testing I conducted.</del>	
I do hereby certify that the analytical results reported here are faithfully reproduced.	

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

**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. ~~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: May 26, 2010

**FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.**



**FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.  
CONSULTANT STATEMENT OF QUALIFICATIONS**

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

<b>FACTs project name:</b>	<b>Upham</b>	<b>Form # ML15</b>
<b>Date May 26, 2010</b>		
<b>Reporting IH:</b>	<b>Caoimhín P. Connell, Forensic IH</b>	

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. He has been a practicing Industrial Hygienist in the State of Colorado since 1987; is the contract Industrial Hygienist for the National Center for Atmospheric Research and has been involved in clandestine drug lab (including meth-lab) investigations since 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 over 200 hours of methlab training for officers of over 25 Colorado Police agencies, 20 Sheriff's Offices, federal agents, and probation and parole officers from the 2<sup>nd</sup>, 7<sup>th</sup> and 9<sup>th</sup> 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; he is a member of the Colorado Drug Investigators Association, the American Industrial Hygiene Association, and the Occupational Hygiene Society of Ireland. Mr. Connell is an Subject Matter Expert on the Department of Homeland Security IAB Health, Medical, and Responder Safety SubGroup, and he conducted the May 2010 Clandestine Drug Lab Professional Development Course for 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 current 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 170 assessments in illegal drug labs, and collected over 1,400 samples during assessments (a detailed list of experience is available on the web at: <http://forensic-applications.com/meth/DrugLabExperience2.pdf>)

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 has provided private consumers, state officials and Federal Government representatives with forensic arguments against fraudulent industrial hygienists and other unauthorized consultants performing invalid methlab assessments.

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

## FINAL DOCUMENTATION CHECKLIST

<b>FACTs project name: Upham St.</b>		<b>Form # ML16</b>
<b>Date: May 12, 2010</b>		
<b>Reporting IH:</b>	<b>Caoimhin P. Connell, Forensic IH</b>	

Mandatory Final Documents 6-CCR 1014-3	DOCUMENTATION	Included
§8.1	Property description field form	<i>Carl</i>
§8.2	Description of manufacturing methods and chemicals	<i>Carl</i>
§8.3	Law Enforcement documentation review discussion	<i>Carl</i>
§8.4	Description and Drawing of Storage area(s)	<i>Carl</i>
§8.5	Description and Drawing of Waste area(s)	<i>Carl</i>
§8.6	Description and Drawing of Cook area(s)	<i>Carl</i>
§8.7	Field observations field form	<i>Carl</i>
	FACTs Functional Space inventory field form	<i>Carl</i>
§8.8	Plumbing inspection field form	<i>Carl</i>
	FACTs ISDS field form	<i>Carl</i>
§8.9	Contamination migration field form	<i>Carl</i>
§8.10	Identification of common ventilation systems	<i>Carl</i>
§8.11	Description of the sampling procedures and QA/QC	<i>Carl</i>
§8.12	Analytical Description and Laboratory QA/QC	<i>Carl</i>
§8.13	Location and results of initial sampling with figure	<i>Carl</i>
§8.14	FACTs health and safety procedures in accordance with OSHA	<i>Carl</i>
§8.15	Contractor's description of decontamination procedures and each area that was decontaminated	NA
§8.16	Contractor's description of removal procedures each area where removal was conducted, and the materials removed	NA
§8.17	Contractor's description of encapsulation areas and materials	NA
§8.18	Contractor's description of waste management procedures	NA
§8.19	Drawing, location and results of final verification samples	<i>Carl</i>
§8.20	FACTs Pre-remediation photographs and log	<i>Carl</i>
	FACTs Post-remediation photographs and log	NA
§8.21	FACTs SOQ	<i>Carl</i>
§8.22	Certification of procedures, results, and variations	<i>Carl</i>
§8.23	Mandatory Certification Language	<i>Carl</i>
§8.24	Signature Sheet	<i>Carl</i>
	Analytical Laboratory Reports	<i>Carl</i>
	FACTs Field Sampling Forms	<i>Carl</i>



FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.

## **APPENDIX B**

### **ANALYTICAL REPORTS FOR FACTS SAMPLES**

## SAMPLING FIELD FORM

<b>FACTs project name: Upham</b>	<b>Form # ML17</b>
<b>Date: May 12, 2010</b>	<b>Alcohol Lot#: A0901 Gauze Lot#: G1003</b>
<b>Reporting IH: Caoimhín P. Connell, Forensic IH</b>	<b>Preliminary X Intermediate____ Final____</b>

Sample ID UM051210-	Type	Location	Func. Space	Dimensions	Substrate
-01	W	Dining room tops of light shades	1	See Notes	Glass
-02	W	Kitchen extraction fan interior	2	See Notes	M
-03	W	Patio top of freezer in corner	3	9" X 9"	PM
-04	W	Back hall tops of door jambs	4	See Notes	PW
-05	W	Upstairs west bedroom top of ceiling light	5	See Notes	PM
-06	W	Upstairs NW Bedroom , top of top shelf in closet	6	9" X 9"	PW
-07	W	Upstairs NE Bedroom, NE Corner of N wall at ceiling	7	9" X 9"	PDW
-08	W	Upstairs Bathroom, medicine chest	8	See Notes	VW
-09	W	Recreation room top of pool table light	9	5" X 17"	M
-10	W	Downstairs NW Bedroom, NW corner of floor	10	10" X 9"	VAT
-11	W	Furnace room top of duct south end	11	9" X 9"	M
-12	W	Downstairs Bath sewer pipe	12	6" X 14"	PM
-13	W	Downstairs south Shop top of duct	13	11" X 8"	M
-14	W	Field Blank	NA	NA	NA
-15	W	Downstairs NE Bedroom top shelf in S closet	14	9" X 9"	PW

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

Surfaces: DW= Drywall, P=Painted; W= Wood, L= Laminated, V= Varnished, M= Metal, C=Ceramic, PI=Plastic

Sample #1 Four glass light shades each with three trapezoidal facets: b1=1", b2=2", h1=5"

Sample #2 Dual cylinder as follows (r=4.5", h=4")+(r=3.5",h=1")

Sample #4 Four jambs as follows: (35" X 0.75") + (34.5" X 0.75") + (34.5" X 0.75") + (34.5" X 0.75")

Sample #5 Dome: (r=7", h=6")

Sample #8 Three components: (16" X 1.") + (14" X 1.") + (23.5" X 2.)

Sample #11 (10% undersampled)



FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.

# SAMPLING FIELD FORM

<b>FACTs project name: Upham</b>	<b>Form # ML17</b>
<b>Date: May 12, 2010</b>	<b>Alcohol Lot#: A0901 Gauze Lot#: G1003</b>
<b>Reporting IH: Caoimhín P. Connell, Forensic IH</b>	<b>Preliminary X Intermediate____ Final____</b>

Sample ID UM051210-	Type	Location	Func. Space	Dimensions	Substrate
-16	W	Attic ventilation assembly near access	16	See Notes	M
-17	W	Furnace interior at living room return grille	15	See Notes	M
-18	W	Field Blank	NA	NA	NA
-19	W	Shed light fixture	2-1	3" X 27"	PM
-20	W	Garage top of light fixture E side	17	4.5" X 20"	PM
-21	W	Master bed bath light fixture	7	See Notes	M/Glass

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

Surfaces: DW= Drywall, P=Painted; W= Wood, L= Laminated, V= Varnished, M= Metal, C=Ceramic, PI=Plastic

Sample #21 Investigatory, mixed media, not used for compliance: (24X1)+((2X2.25)\*4)+dome: ((r=0.75, Stemwall h=1.25)\*3)

Sample #17 (13" X 3")+ (6" X 3")+ (1" X 3")+ (5" X 4")+ (2" X 8")

Sample #16 (9" X 6")+ (10" X 6")

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# ANALYTICAL CHEMISTRY INC.

Established in 1979

4611 S. 134th Place, Ste 200  
Tukwila WA 98168-3240

Website: [www.acilabs.com](http://www.acilabs.com)

Phone: 206-622-8353

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<b>Lab Reference:</b>	10128-02
<b>Date Received:</b>	May 17, 2010
<b>Date Completed:</b>	May 18, 2010

May 19, 2010

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

**CLIENT REF:** Upham

**SAMPLES:** wipes/4

**ANALYSIS:** Methamphetamine by Gas Chromatography-Mass Spectrometry.

**RESULTS:** in total micrograms (ug)

<b>Sample</b>	<b>Methamphetamine, ug</b>	<b>% Surrogate Recovery</b>
UM051210- 01	0.217	92
UM051210- 17	17.5	98
UM051210- 20	19.0	95
UM051210- 21	1.67	103
QA/QC Method Blank	< 0.004	
QC 4.00 ug Standard	4.01	
QA 0.020 ug Matrix Spike	0.022	
QA 0.020 ug Matrix Spike Duplicate	0.022	
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





## CDL SAMPLING &amp; CUSTODY FORM

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**Page**  
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## **APPENDIX C**

### **COMPACT DIGITAL DISC PHOTOGRAPHS**