FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.

Preliminary Assessment
And
Decision Statement
of an
Identified Illegal Drug Laboratory
at
1636 Mount Evans Drive
Longmont, Colorado

Prepared for:

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May 13, 2010

Errata Sheet

May 18, 2010

Correction -Page 22:

Therefore, based on the *totality of the circumstances*, FACTs concluded that there is sufficient evidence to support the initial hypothesis that several areas were non-compliant or *probably* non-compliant and some areas were *probably* compliant.

Should read:

Therefore, based on the *totality of the circumstances*, FACTs concluded that there is sufficient evidence to challenge the initial hypothesis and that several areas were non-compliant or *probably* non-compliant and some areas were *probably* compliant.

Disambiguation – Page 31

Sample numbers MEM042710-4, MEM042710-5, MEM042710-18 were implied in Table 5. These samples are hereby explicitly included in Table 5.

Correction – Page 68

A draft version of Form ML 16 was inadvertently included in the final document package, and Page 68 should be struck in its entirety.

Disambiguation –

Field forms bearing the date May 13, 2010 reflect the day the form was formalized, not necessarily the conditions on site for that date.

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Appendix A Scope of Work
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Appendix C Analytical Reports
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EXECUTIVE SUMMARY

On January 28, 2010, a newspaper article ran in the *Longmont TimesCall* wherein it was reported that testimony given on January 27, 2010, by a witness in a murder trial revealed that he smoked methamphetamine at 1636 Mt. Evans Drive, in Longmont, CO, (the subject property).

On April 8, 2010, in the same newspaper, it was reported that Boulder County Prosecutor, Ryan Brackley stated that Mr. Robert Wittmer, an occupant of the subject property, had returned to that address and smoked methamphetamine following a murder in a local park.

As such, "discovery" of an "illegal drug laboratory" and "notification" of the same, as those terms are defined in State Statute, occurred at least on January 28, 2010. The discovery and notification triggered the requirement for a "Preliminary Assessment" of an illegal drug laboratory to be performed, as that term is defined in State regulations.

On Thursday, April 27, 2010, personnel from Forensic Applications Consulting Technologies, Inc. (FACTs) performed a standard Preliminary Assessment (PA) at an illegal drug laboratory located at the subject property. The PA resulted in the identification of several non-compliant areas within the structure. An area was deemed noncompliant if sampling results confirmed or indicated concentrations of methamphetamine for that functional space in excess of 0.5 µg/100cm2.

On April 30, 2010, based on the results of sampling conducted during the PA, FACTs prepared a scope of work, identifying six areas of noncompliance and identifying those areas as in need of decontamination.

From May 5, 2010 to May 11, 2010, InSure Fire and Water Restoration, (a remediation contractor) performed cleaning and decontamination activities for the entire structure, including areas which were not identified in the PA.

On Tuesday, May 11, 2010, FACTs performed post decontamination sampling pursuant to State regulations.

Based on the totality of the circumstances, FACTs makes the following observations:

- The property exhibited overt noncompliance with Colorado's methamphetamine cleanup standards.

- Samples taken during the Preliminary Assessment conclusively demonstrated the presence of methamphetamine contamination, and, pursuant to Colorado Revised Statutes, CRS §16-13-103, the structure, all out buildings, all vehicles and all personal items remaining therein met the definition of an "illegal drug laboratory."

- A Class 1 Public Nuisance, as defined in CRS §16-13-303(1) existed at the subject property from at least April 20, 2009 forward.

- In violation of CRS §25-18.5-104 repeated unlawful entries were made into the property by persons unknown.

- In violation of CRS §25-18.5-103(3) and 6 CCR 1014-3 5.8 *et seq,* contaminated materials from the property were unlawfully relocated to another unsecured and unknown area. The unknown location now is considered similarly contaminated and when and if known must be assessed pursuant to Colorado Regulations.

- In violation of CRS §25-18.5-103(b) and 6 CCR 1014-3 5.8 *et seq,* persons unknown engaged in the unlawful removal of vehicles associated with the subject property: these vehicles are now considered similarly contaminated and when and if they are located, they must be assessed pursuant to Colorado Regulations.

- Pursuant to the state-of-knowledge toxicological risk models developed by the State of Colorado, the concentrations of methamphetamine in the post decontamination samples at the subject property were not sufficiently elevated to be considered a "contaminant" as that term is defined in 6 CCR 1014-3 (§3).

- Pursuant to 6 CCR 1014-3 (Mandatory Appendix A) FACTs hereby issues, by virtue of this document, a *Decision Statement* affirming that:

    a. The initial hypothesis was rejected during the PA and the initial null hypothesis was accepted (sufficient evidence existed to confirm the presence of methamphetamine).

    b. Upon completion of decontamination activities, the Post Decontamination hypothesis was sequentially tested, and no support was found; the null hypothesis was accepted (the presence of trace amounts of methamphetamine notwithstanding), the property was found to be compliant.

- Pursuant to this Decision Statement, FACTs recommends to the Governing Body that the subject property be released for immediate occupancy; no harmful chemical residues were found at concentrations above the regulatory thresholds or that may present an immediate or long-term threat to human health and/or the environment.

The PA and the post decontamination sampling were performed by Mr. Caoimhín P. Connell who was assisted in the field by Ms. Christine Carty and Mr. Robert Seel., Technicians. [1]

This report was produced under extreme time constraints, and as such, this work product did not go through the normal FACTs internal peer review. FACTs reserves the right to make any corrections to style, format, or material content.

INTRODUCTION

Property Description

The subject property is a 1969 tri-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 crawlspace and exterior shed, but excluding the attic, the subject property contained approximately 2,236 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). The Remediation Contractor was responsible for ensuring its own compliance with OSHA. FACTs has no firsthand knowledge of the Remediator's actions, activities or procedures at the subject property. However, FACTs is not aware of any violations of OSHA regulations during this project.

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,

[1] 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.

information obtained in the Preliminary Assessment, and those findings, enter the public domain and are not subject to confidentiality.[2]

The Preliminary Assessment must be conducted according to specified requirements[3] 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 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).

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, Boulder County Public Health is the "Governing Body" as defined in CRS §25-18.5-101:

Boulder County Public Health
Administration/Environmental Health Site
3450 Broadway
Boulder, CO 80304
Att: Michael Richen, CIH, Indoor Air Quality Specialist

County

On January 7, 2009, Boulder County adopted Ordinance 2006-1 concerning methamphetamine contamination in vehicles and structures. Certain aspects of the Boulder County ordinance are contrary to State requirements. Nevertheless, since State regulations and State statutes supersede county regulations, FACTs has performed this assessment in full compliance with State regulations and State statutes.

According to Boulder County Ordinance:

> ***Law enforcement notice to other authorities***
> *Law enforcement or other authorities who identify the existence of an illegal methamphetamine laboratory after the effective date of this ordinance shall promptly*

[2] Section 8.26 of 6 CCR 1014-3

[3] Section 4 of 6 CCR 1014-3

notify Boulder County Public Health, Boulder County Land Use, Building Division, and if appropriate, Child Protection Services. If the methamphetamine laboratory is located within an incorporated town or city, Boulder County Public Health shall be notified, and if appropriate, Child Protection Services.

In this case, although Longmont Police Department apparently failed to notify Boulder County Department of Health, discovery and notification occurred simultaneously when law enforcement personnel were on public record stating that use of methamphetamine had occurred at the property, and that information was published and made public. Generally speaking, Statewide, law enforcement agencies are unaware of their County Health ordinances, the State methamphetamine environmental regulations and their obligations therein.

Posting

According to Boulder County ordinance:

> ***Declaration of property as a public health nuisance***
> *A property identified as the site of an illegal methamphetamine laboratory shall be declared a public health nuisance and unfit for human habitation or use. A warning sign shall be posted on the entrance of the affected part of the property by law enforcement, Public Health, the Chief Building Official or his designee. With respect to a vehicle, the warning sign shall be posted on the front windshield.*

Although the property was not posted as required during our site assessment, it is our understanding that the Boulder County Department of Health may not have been notified by the Boulder County Prosecutor.

Prohibition of Entry

In addition to State statutes and State regulations, Boulder County ordinance required the following:

> ***Occupation Prohibited***
> *Upon the issuance and posting of a Declaration of Public Health Nuisance, all occupants of such building or structure shall immediately vacate the premises, and such vehicles shall be impounded by the police. With the exception of persons evaluating the contamination level, remediating the contamination, or conducting fire or police activities, no person shall occupy, enter or allow occupancy or entrance to a building or structure which has been declared a public health nuisance, and no person shall occupy or drive a vehicle which has been declared a public health nuisance, until such declaration is revoked or modified to allow occupancy. All who enter must have the required health and safety training, and wear appropriate personal protective equipment. Removal of the posted Declaration of Public Health Nuisance by anyone other than the Building Official, Public Health or law enforcement authorities is prohibited.*

PRELIMINARY ASSESSMENT

Preliminary Hypothesis

During the Preliminary Assessment, 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, 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.[4] 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.

Contrary to common belief, 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:[5]

> *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.*

Initial Statement on Hypothesis Testing

Regarding this subject property, 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 various areas of the primary residence 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	
§8.2	Description of manufacturing methods and chemicals	
§8.3	Law Enforcement documentation review discussion	

Table 1
Inventory of Mandatory Elements and Documentation

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

[5] Section 4.6 of 6 CCR 1014-3

§8.4	Description and Drawing of Storage area(s)	✓
§8.5	Description and Drawing of Waste area(s)	✓
§8.6	Description and Drawing of Cook area(s)	✓
§8.7	Field Observations field form	✓
	FACTs Functional space inventory field form	✓
§8.8	Plumbing inspection field form	✓
	FACTs ISDS field form	✓
§8.9	Contamination migration field form	✓
§8.10	Identification of common ventilation systems	✓
§8.11	Description of the sampling procedures and QA/QC	✓
§8.12	Analytical Description and Laboratory QA/QC	✓
§8.13	Location and results of initial sampling with drawings	✓
§8.14	FACTs health and safety procedures in accordance with OSHA	✓
§8.15 -§8.19	These sections are not applicable to a Preliminary Assessment	NA
§8.20	FACTs Pre-remediation photographs and log	✓
	FACTs Post-remediation photographs and log	✓
§8.21	FACTs SOQ	✓
§8.22	Certification of procedures, results, and variations	✓
§8.23	Mandatory Certification Language	✓
§8.24	Signature Sheet	✓
NA	Analytical Laboratory Reports	✓
	FACTs final closeout inventory document	✓
	FACTs Field Sampling Forms	✓

Table 1 (continued)
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 Metal 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[6]

Review of Law Enforcement Documentation

As part of the Preliminary Assessment, FACTs is required by regulation[7] to review available law enforcement documents pertinent to a subject property. During this project, the Boulder County Sheriff's Office and the Longmont Police Department exhibited the highest level of professionalism and cooperated with the requirements of our Preliminary Assessment, and promptly responded to our request for information. Boulder County Sheriff's Office informed us they did not have any information on the property and recommended speaking with Det. Tim Lewis of the Longmont Police Department.

Due to the unusually short time constraints associated with completing the PA for this property, Detective Lewis was given very short notice requesting information. FACTs had no choice but to arrive unannounced at the Longmont Police Department and Det. Lewis was kind enough to take time out of an in progress meeting to inform FACTs there were no documents available on the property pertinent to controlled substances.

Visual Inspection of the Property

As part of the Preliminary Assessment, on April 27, 2010 Mr. Connell performed a visual inspection of the subject property. Pursuant to regulatory requirements, the subject

[6] Taken from Google Earth ™ and the USGS.

[7] 6 CCR 1014-3 (Section 4.2)

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" 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 Technicians donned fresh Tyvek® suits and booties upon entering the property. All equipment brought into the subject property was staged at or near the front door of each structure entered. 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.[8]

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, stairs, foyer, foyer closet, hallway
1	2	Dining room and kitchen
1	3	Upstairs bathroom
1	4	Upstairs southeast bedroom
1	5	Upstairs south bedroom
1	6	Upstairs west bedroom
1	7	Downstairs recreation room
1	8	Downstairs bedroom
1	9	Downstairs bathroom
1	10	Downstairs mudroom and laundry room
1	11	Crawlspace
1	12	Attic #1
1	13	Garage
1	14	Furnace
1	15	Attic #2
2	1	Exterior metal shed

Table 2
Functional Space Inventory

[8] 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: Foyer, Living Room *et al*.

This is the area upon entry into the structure from the west door (main entrance). The area is a largely open plan with a large thermal bypass leading from the downstairs areas, through the foyer and into the upstairs.

As described later, it was difficult to locate a suitable location for sampling in this area. A discreet sample was collected from the interior of the front closet which conclusively contained trace methamphetamine.

This space, like the entire structure contained new carpet and virtually all surfaces were freshly painted. As such, this space, similar to the entire interior structure, did not contain any visual indicators.

Functional Space 2: Dining Room and Kitchen

This space is the room one enters directly from the garage on the north side of the structure. The term describing the room is used as is commonly understood. This room is contiguous with the kitchen area.

The area appears to be completely refurbished including new cabinetry and related fixtures. A discreet sample collected from the top of the refrigerator conclusively contained trace methamphetamine.

Functional Space 3: Upstairs Bathroom

This is the bathroom that is accessed from the upstairs hallway. The bathroom appears to have newly installed cabinetry and has been freshly painted.

A discreet sample collected from the tops of the doors conclusively contained trace methamphetamine.

Functional Space 4: Upstairs Southeast Bedroom

This in the southeast corner of the structure and has been completely refurbished: As such there are no visual indicators in this room.

Attic Number 2 is accessed from this room.

A discreet sample collected from the top of the shelf in the closet of this space conclusively contained trace methamphetamine.

Functional Space 5: Upstairs South Bedroom

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

A discreet sample collected from the top of the closet doors conclusively contained trace methamphetamine; this sample was 5% undersampled.

Functional Space 6: Upstairs West Bedroom

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

A discreet sample collected from the top of the closet doors conclusively contained noncompliant concentrations of methamphetamine; this sample was 10% undersampled.

Functional Space 7: Downstairs Recreation Room

The downstairs recreation room is the room that one enters directly from the stairs leading to the downstairs portion of the house. The room is carpeted and contains wood paneled walls. The crawlspace is accessed from the north wall of this room. There were no visual indicators in this room.

A discreet sample collected from the top of the ceiling fan conclusively contained trace methamphetamine.

Functional Space 8: Downstairs Bedroom

This is the only bedroom located in the downstairs portion of the house and is delineated by the walls that typically determine the room as the term is commonly understood.

There were no visual indicators in this room.

A discreet sample collected from the top of the closet doors conclusively contained trace methamphetamine.

Functional Space 9: Downstairs Bathroom

The small bathroom is located off the east entrance hallway. There were no visual indicators in this room but a discreet sample collected from the top of the light fixture conclusively contained trace methamphetamine.

Functional Space 10: Downstairs Laundry and Mud Room

The east side of the structure contains two entrances; a garage entrance and a slightly subterranean entrance. This functional space is accessed from the subterranean entrance. It appears to be newly furbished with fresh paint. At the end of the hallway is a laundry niche with plumbing hookups. At the time of our assessment, there were no major appliances in the laundry area.

There were no visual indicators in this room but a discreet sample collected from the top of the light fixture conclusively contained noncompliant concentrations of methamphetamine.

Functional Space 11: Crawlspace

This space is a large area under the north half of the residence and does not follow the floor plan of the house. Included in the crawlspace is the forced air furnace system and the hot water heater. A single discreet sample was collected from the top of one of the ducts in the crawlspace which conclusively contained noncompliant concentrations of methamphetamine.

The crawlspace, like the attics, appears to be largely undisturbed and appears to represent the area at the time of occupancy. There were no visual indicators in this space.

Functional Space 12: Attic Number 1

This attic is an occupiable space large enough to facilitate storage. As such, a sample was collected from this space. Although there are no visual indicators, the sample collected from the galvanized cleats in this space conclusively contained trace concentrations of methamphetamine.

Functional Space 13: Garage

The garage is defined as that term is normally understood. The garage appears to be largely undisturbed. Although there were no conclusive visual indicators in this space, the discreet sample collected from the fluorescent light fixture in this space conclusively contained trace concentrations of methamphetamine.

Functional Space 14: 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 slightly elevated.

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%[9] and half[10] of the substance is released from the user's pipe. Of that material which is inhaled, between 33%[11] and 10%[12] of the nominal dose is not absorbed into the body (leaving the

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[9] 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

[10] Cook CE, Jeffcoat AR, Hill JM, et al. *Pharmacokenetics of Methamphetamine Self-Administered to Human Subjects by Smoking S-(+)-Methamphetamine Hydrochloride*. Drug Metabolism and Deposition 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.)

[11] 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.)

remainder airborne). Work conducted by Industrial Hygienists at the National Jewish Hospital[13] 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 (µg/m3) to over 130 µg/m3. 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*."[14]

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 was an effective mechanism of dissemination and may be a continued source of contamination unless appropriately addressed.

The result of the furnace sample was within a gray area that was numerically just below the regulatory threshold, but so close such that the upper bound limit of confidence was above the regulatory threshold. As described in the "Sampling" section, in the totality of the circumstances, the furnace was deemed noncompliant.

Functional Space 15: Attic Number 2

This attic is not an occupiable space and is not reasonably large enough to enter or to facilitate storage. Furthermore, there were no signs of storage or entry into the space. A sample was collected from the interior of the duct that traverses this space. The discreet sample contained trace concentrations of methamphetamine.

Structure Number 2: Exterior Shed

Functional Space 1: Shed Interior

We did not observe any visual indicators in the shed. The discreet sample collected from the top of the central seam in the shed conclusively contained trace concentrations of methamphetamine.

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[12] 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

[13] 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.)

[14] 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.)

Exterior Grounds

Although not truly a functional space *per se*, the exterior grounds were assessed independently. The landscaping was somewhat convoluted and we did not observe any visual indicators that would suggest waste materials were discarded in the exterior grounds. Furthermore, we did not observe any visual indicators that would suggest contamination migration.

Sewerage System

The Boulder 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

Heavy modification and structural disturbance of the structure by the renovations that have been performed in the structure make an assessment of potential cook areas virtually impossible. However based on our observations heaviest use probably occurred in the downstairs portions of the house. We were not able to determine if any other process other than use occurred.

Identification of Contamination Migration

Based on our visual assessment, we do not believe there was an high probability that contamination migrated off-site (except possibly through the public sewer system).

Sample Collection

Wipe Samples

The samples collected throughout the subject property comprised 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, 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.

Due to the fact that the property had been unlawfully cleaned, many surfaces were encapsulated with new paint. 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 cm2 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.

In this property, due to the heavy modifications to the property, it was difficult to find sample locations that met all three criteria. Therefore, for some samples, we selected the best locations for sampling based on the primary objective of the sampling hypothesis even where those locations did not present at least 500 cm2 of surface area. Since, as described below, all of the samples to be used as final verification were invalidated, the issue is moot, and mentioned here only so the reader may better understand why, in some of the samples, less than 500 cm2 were collected during the PA.

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 submitted pursuant to regulation. The blanks were submitted "blind" meaning the analyzing laboratory had no indication that one or more of the samples may be QA/QC related.

Cross Contamination

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

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 cm2), 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 fascia* 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 that lays between two confidence limits and may be depicted thus:

Figure 2
Confidence intervals of Reported Values

The reported value (RV) lies somewhere in 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).

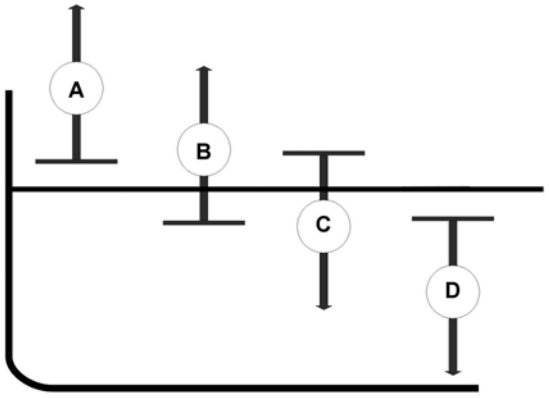


Figure 3
Uncertainty in Reported Values

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 an 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.[15, 16]

[15] 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)

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, as expected, the samples exhibit the expected lognormal distribution.[17] The sampling error (as determined by the data distribution) indicates that 34% of all randomly collected samples from the property would exceed the State's cleanup level.[18]

In addition to sampling error, all samples exhibit analysis error. In this case, the samples exhibited "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 contained more methamphetamine than was being reported in the final laboratory report. The mean spike recovery was 95%, with a standard deviation of 5%.

Therefore, to accommodate the systematic error, and present the best available information, the sample results were corrected for the loss, and are reported in the table below as "Corrected." For the correction, each individual sample spike recovery was used to determine the percent loss of mass, which was mathematically added back to the sample. After the correction, the UCL at 95% was estimated and the final sample result is reported in the far right hand column.

The results of the methamphetamine samples are summarized in the table below. The prefix for each sample ID is "MEM042710-"

[16] 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 , May 10, 2004).

[17] One-Tail Percentage Point of the W Test = 0.8870 and the goodness of fit W Test value for a lognormal distribution was 0.9139 whereas the goodness of fit W Test value for a Gaussian distribution was only 0.8040 (and not 0.8045 as reported in the Scope of Work). Therefore, the goodness of fit was better for the lognormal distribution.

[18] If the goodness of fit W Test value for a Gaussian distribution was used, the error would indicate that 40% of the time, a randomly collected sample from the property would exceed the mandatory clean-up level.

Sample ID	Location	Uncorrected Result µg/100cm2	Corrected Result µg/100cm2	UCL_{95} µg/100 cm2
1	Crawlspace top of horizontal supply duct	0.643	0.69	0.88
2	Living room furnace return	0.383	0.42	0.53
3	Downstairs family room ceiling fan blade	0.253	0.26	0.33
4	Upstairs hallway whole-house fan duct	0.212	0.24	0.30
5	Attic galvanized roof structure cleats	0.007	0.01	0.01
6	Field blank	BDL	BDL	BDL
7	Garage ceiling light fixture east side	0.102	0.10	0.13
8	Field blank	BDL	BDL	BDL
9	Living room closet, top of shelf	0.176	0.18	0.23
10	Kitchen top of fridge	0.009	0.01	0.01
11	Upstairs bathroom tops of doors	0.062	0.06	0.08
12	Se bedroom closet, top of shelf	0.101	0.11	0.15
13	S bedroom closet top of doors	0.081	0.08	0.10
14	West bedroom closet door tops	0.790	0.82	1.05
15	Downstairs bedroom closet door tops	0.396	0.40	0.52
16	Downstairs bathroom top of light fixture	0.083	0.09	0.11
17	Downstairs laundry room light fixture	1.098	1.11	1.42
18	Shed top of inside center rail	0.006	0.01	0.01

Table 3
Results of Preliminary Methamphetamine Wipe Samples

Therefore, based on the *totality of the circumstances*, FACTs concluded that there is sufficient evidence to support the initial hypothesis that several areas were non-compliant or *probably* non-compliant and some areas were *probably* 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.*"

Furthermore, pursuant to state regulations, during sampling with the intent to issue a 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.*

That is – if, in the absence of any information that would support the hypothesis that a given area is non-compliant, the sample results may be used as the exclusive evidence that the area is compliant.

FACTs prepared a Scope of Work that identified six areas to be cleaned. We excluded the remaining areas from further considerate provided that specific engineering controls were established and maintained to ensure against contamination migration during decontamination. For reasons unknown, the Scope of Work was not followed, the engineering controls were not established and the structure as a whole was cleaned. Therefore, the original samples collected during the PA and intended to clear each functional space were invalidated, necessitating the collection of post mitigation samples in all functional spaces pursuant to 6 CCR 1014-3 §6.0.3.

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 2.0 µg (RPD 6%, recovery =94%); Matrix spike 0.020 µg (RPD 10%; recovery 110%); Matrix spike Dup 0.020 µg; (RPD <1%; recovery 100%); Surrogate recovery: High 100% (Sample 10), Low 82% (Sample18); FACTs reagents: MeOH lot #A0901 <MDL for n=9; Gauze lot 1002 <MDL for n=6. The QA/QC indicate the data met the data quality objectives; and the results exhibit 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.

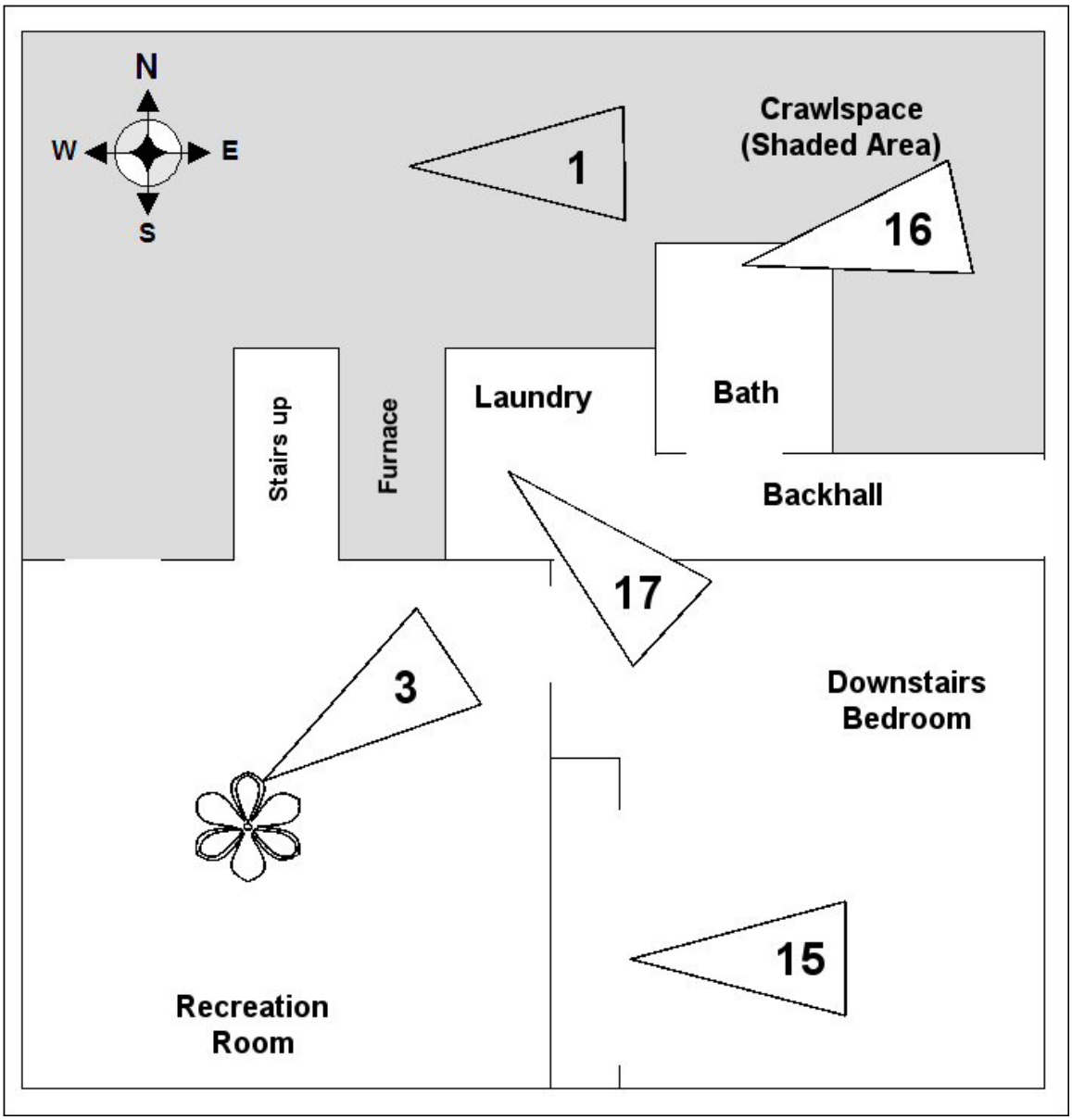


Figure 4
Initial Sample Locations Basement and Crawlspace

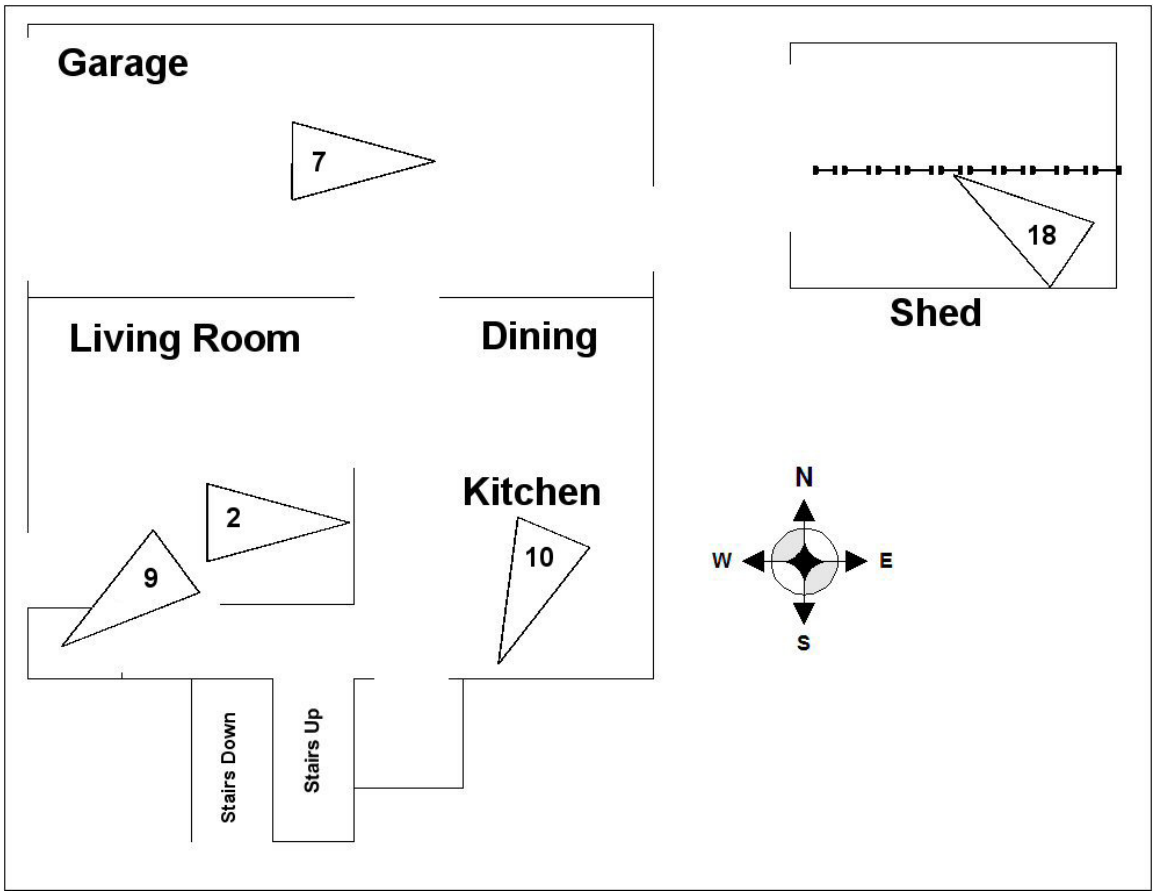


Figure 5
Initial Sample Locations Main Floor

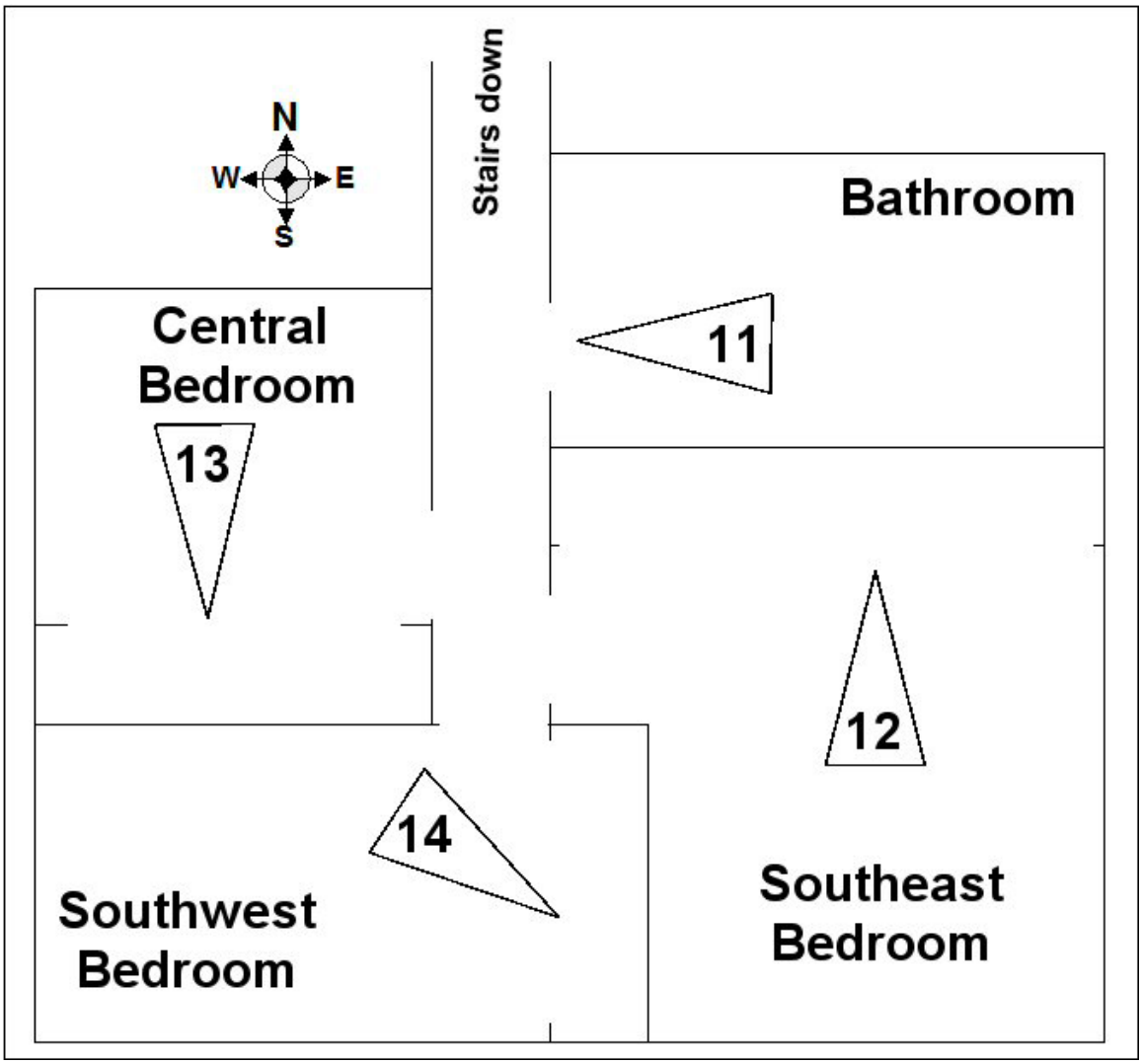


Figure 6
Initial Sample Locations Top Floor

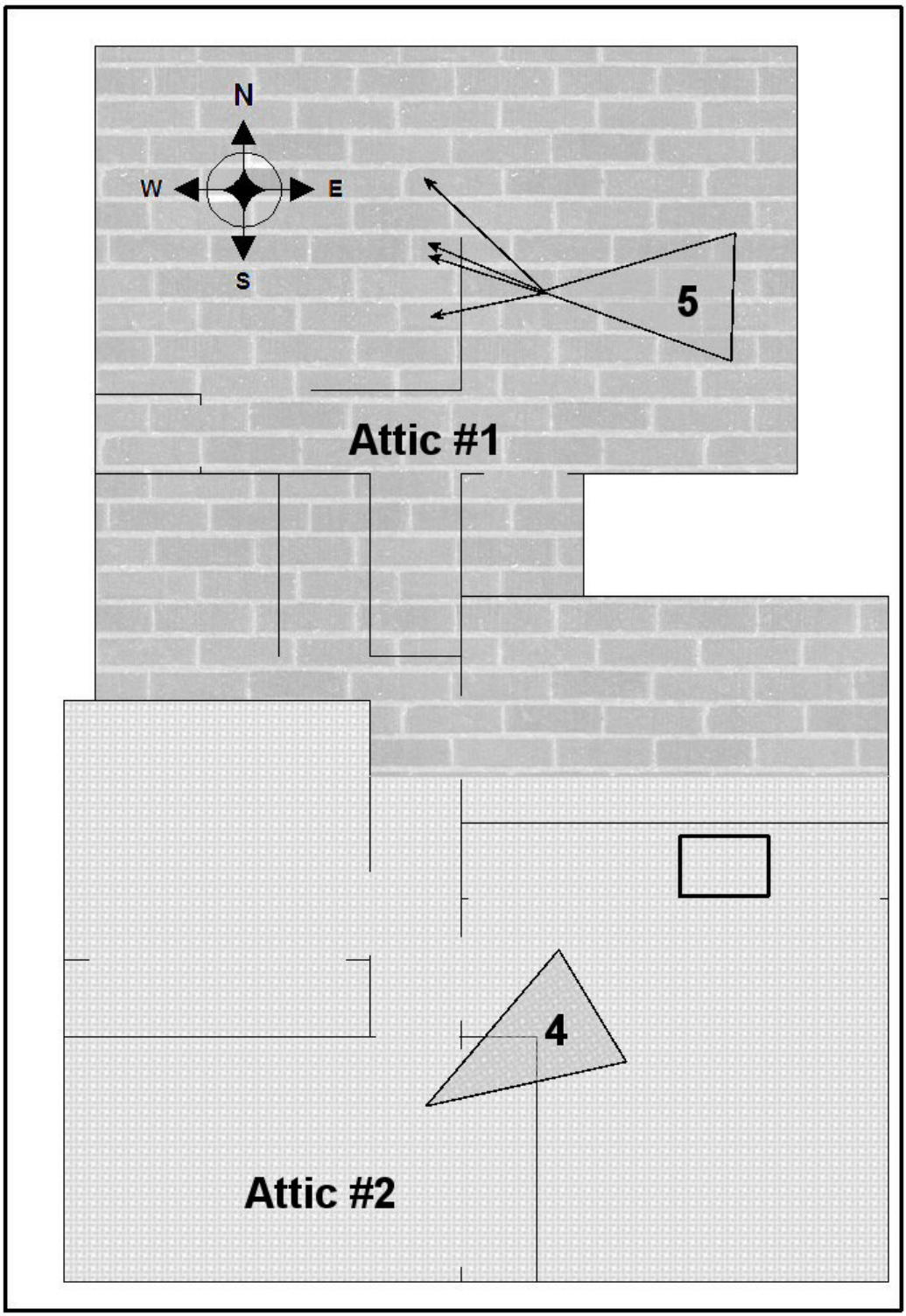


Figure 7
Initial Sample Locations Attics

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 existed in isolated areas in the structure.

FACTs prepared a Scope of Work which is appended to this discussion as Appendix A. The scope of work was not followed, and essentially became a moot document.

Within the Scope of Work, FACTs inadvertently identified Colorado Springs Police Department. At the preparation of the Scope of Work, FACTs was involved in five other illegal drug laboratories in the State of Colorado; one of which was in Colorado Springs. On the day the Scope of Work was prepared, FACTs had been in intensive discussions with the Colorado Springs Police Department and we simply erroneously identified the wrong agency in the Scope of Work.

FINAL CLEARANCE SAMPLING

On May 11, 2010 FACTs performed post mitigation sampling pursuant to State Regulations.

Based on the analytical results of the objective sampling performed by FACTs, and based on the totality of the circumstances, FACTs concludes that insufficient information exists to support the hypothesis that any area in the property is non-compliant. Therefore, pursuant to State Board of Health Regulations, FACTs accepts the null hypothesis, and is required by State Regulation to issue this **DECISION STATEMENT** and hereby declares the subject property compliant with CRS 25-18.5-103 (2).

FACTs makes the recommendation to the Governing Body to allow immediate reoccupancy.

Regulatory Requirements

State Requirements

After a property has been remediated, an Industrial Hygienist must test the hypothesis that the property is not compliant with State Statutes (i.e. the property contains contamination levels in excess of regulatory thresholds). As part of the hypothesis testing, the Industrial Hygienist must perform objective sampling to quantify the remaining contamination (if any).

If, based on the totality of the circumstances, the Industrial Hygienist finds insufficient evidence to support the hypothesis that any given area is non-compliant, [19] that area shall be deemed to be compliant with CRS §25-18.5-103 (2) and the Industrial Hygienist shall release the property.[20]

In order for a proper final declaration to be made, a final decontamination verification assessment must be performed by an Industrial Hygienist as defined in CRS §24-30-1402. This decontamination verification was performed by Mr. Caoimhín P. Connell, Forensic Industrial Hygienist, who meets the statutory definition and is entitled to practice Industrial Hygiene in the State of Colorado and is additionally qualified to perform the necessary testing.

According to 6-CCR 1014-3, specific mandatory information must be presented in the final verification assessment. Included with this discussion, is a DVD which contains mandatory information. This Decision Statement is not complete without the DVD. Table 1, below, summarizes the mandatory information:

Mandatory Final Documents 6-CCR1014-3	**DOCUMENTATION**	**Included**
§8.1	Property description field form	✓
§8.2	Description of manufacturing methods and chemicals	✓
§8.3	Law Enforcement documentation review discussion	✓
§8.4	Description and Drawing of Storage area(s)	✓
§8.5	Description and Drawing of Waste area(s)	✓
§8.6	Description and Drawing of Cook area(s)	✓
§8.7	Field Observations field form	✓
	FACTs Functional space inventory field form	✓
§8.8	Plumbing inspection field form	✓
	FACTs ISDS field form	✓
§8.9	Contamination migration field form	✓
§8.10	Identification of common ventilation systems	✓
§8.11	Description of the sampling procedures and QA/QC	✓
§8.12	Analytical Description and Laboratory QA/QC	✓
§8.13	Location and results of initial sampling with figures	✓
§8.14	FACTs health and safety procedures in accordance with OSHA	✓
§8.15	Contractor's description of decontamination procedures and each area that was decontaminated	✓
§8.16	Contractor's description of removal procedures each area where removal was conducted, and the materials removed	✓

[19] No guarantee is ever made or implied that the property is completely free of contamination. Rather, a reasonable, standardized approach to decontamination is executed.

[20] 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.

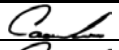
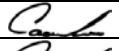
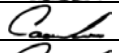
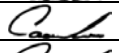
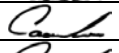
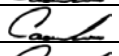
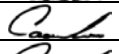
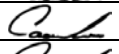
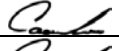
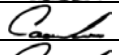
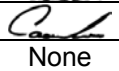
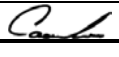
§8.17	Contractor's description of encapsulation areas and materials	
§8.18	Contractor's description of waste management procedures	
§8.19	Drawing, location and results of final verification samples	
§8.20	FACTs Pre-remediation photographs and log	
	FACTs Post-remediation photographs and log	
§8.21	FACTs SOQ	
§8.22	Certification of procedures, results, and variations	
§8.23	Mandatory Certification Language	
§8.24	Signature Sheet	
NA	Analytical Laboratory Reports	
	FACTs final closeout inventory document	
	Available Law Enforcement documents	None
	FACTs Field Sampling Forms	

Table 4
Inventory of Mandatory Final Information

County Requirements

As already discussed, the County of Boulder has implemented a County-wide ordinance regarding illegal drug laboratories, and fatal flaws notwithstanding, the Ordinance describes the powers of the County to allow re-occupation of a property.

Verification Sampling

Inspection

During the final inspection, FACTs did not observe any visual indicators or find any other reason that would support the primary hypothesis of noncompliance.

Sample Collection

During final verification sampling, exclusively wipe samples were collected from suitable surfaces at the subject property. All samples were collected by FACTs in a manner consistent with State Regulation 6-CCR 1014-3.

For this property, it was FACTs' professional opinion that, based on the totality of the circumstances random sampling within each functional space would be most appropriate. The *general* sample location within each functional space was randomly identified by the input of an unpredictable number, whose output was a function of a simple algorithm. In this way, every and all surfaces had an equal probability of being sampled, and the Industrial Hygienist had no way of knowing the exact *general* location of the sample. Once the algorithm identified the *general* sample location, each possible sample area was assigned a numerical value, and the final sampling location was determined by the algorithm. If the resultant surface was deemed by professional judgment to be a suitable surface, the sample would be collected. Where the randomly selected location resulted in an unsuitable surface, the selection process was moved backwards in a step-by-step manner until the next available suitable surface was encountered. Surfaces with an intrinsic low probability of contamination were excluded from consideration (e.g.

windows, water basins or water catchment areas, faucets, etc.) Each sample area was then delineated with a measured outline and sampled.

Wipe Samples

The wipe sample medium was individually wrapped commercially available Safeway™ brand gauze pads (FACTs Lot# G002). Each pad was moistened with reagent grade methyl alcohol (FACTs Lot# A0901). Each gauze pad was prepared in a clean environment and inserted into an individually identified plastic centrifuge tube with a screw-cap.

Prior to the collection of each sample, the Industrial Hygienist donned fresh surgical gloves to prevent the possibility of cross-contamination. Consistent with State Regulations and good sampling theory, the ultimate location of the samples was based on professional judgment.

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.

Samples were maintained in the control of FACTs at all times, and submitted via FedEx overnight to Analytical Chemistry, Inc.

Sample Results

In the table below, we have presented the results of the final verification sampling. Each Sample has the prefix "MEM051110." For each sample, the decision threshold was 0.5 µg/100cm2.

Sample ID		Functional Space	Area cm2	Result µg/100cm2	Status
-1	Living room closet door outside surface	1	523	0.038	PASS
-2	Kitchen ceramic tile east of stove on S Wall	2	523	<0.006	PASS
-3	US Bathroom E wall inside closet	3	523	0.009	PASS
-4	US SE Bedroom SW corner of floor	4	523	0.024	PASS
-5	11BX	NA	NA	NA	PASS
-6	US S Bedroom window sill on south wall	5	565	0.006	PASS
-7	US W Bedroom window sill on west wall	6	565	<0.005	PASS
-8	DS Rec Room top of wood burning stove	7	523	0.028	PASS
-9	DS Bedroom Closet ceiling in NW corner	8	523	<0.006	PASS
-10	DS Bath W wall south corner at floor	9	523	<0.006	PASS
-11	DS Laundry light fixture	10	581	0.047	PASS
-12	11BX	NA	NA	NA	PASS
-13	Crawlspace top of air duct	11	723	<0.004	PASS
-14	Garage top of door opening mechanism	13	671	0.097	PASS
-15	Furnace interior, exterior of fan housing	14	753	0.080	PASS

The symbol "<" indicates that the concentration was "less than" the reported value (detection limit).

Table 5
Summary of Final Sample Results

During the remediation process, negative air machines were employed to create negative pressure in the structure during remediation. One 2,000 CFM unit was placed in the dining room and another was placed in the upstairs southeast bedroom. A smaller negative air unit was placed in the crawlspace.

The negative air units were capable of maintaining 0.15" WC with the doors to the house left open. The remediators informed us they were pulling approximately 0.5" WC with the doors closed. Therefore, we can be confident that there was no contamination migration into the attic spaces.

Pursuant to State regulation 6 CCR 1014-3 §6.0.3, a final sample was collected from each functional space wherein remediation activities occurred.

Quality Assurance/Quality Control Precautions

Field Blanks

For QA/QC purposes, and in accordance with State requirements, one field blank was submitted for every ten wipe samples. The field blanks were randomly selected from the sampling sequence and submitted along with the samples for methamphetamine analysis. To ensure the integrity of the blanks, 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 blank, laboratory personnel were not informed which specific sample may have been a blank.

Field Duplicates

For the purposes of the data quality objectives associated with this final verification sampling, duplicates were not required, and none were collected.

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. Prior to entering the property, the Industrial Hygienist and his technician donned a fresh disposable Tyvek suit. The ladder brought into the property had washed at a carwash prior to being brought on site.

Quality Assurance / Quality Control

The following section is not intended to be understood by the casual reader; this mandatory QA/QC section is standard SW846 style QA/QC reporting. All abbreviations are standard laboratory use.

MDL was 0.004 µg; LOQ was 0.03 µg; MBX <MDL; LCS 0.1 µg (RPD 1%, recovery =101%); Matrix spike 0.02 µg (RPD 5%; recovery 105%); Matrix spike Dup, 0.02 µg (RPD 5%; recovery 105%); Surrogate recovery (all samples): High 97% (Sample 13, 15), Low 91% (Samples 3,8); FACTs reagents: MeOH lot #A0901 <MDL for n=13; Gauze lot #G1002 <MDL for n=8.

The QA/QC indicate the data met the data quality objectives; and the results appear to exhibit a net negative bias (sample results may be slightly higher than reported). However, the bias owuild increase each sample result by approximately 5%,and therefore is not significant from a regulatory point of view. Due to the very tight time constraints, FACTs did not calculate the UCL for each sample, since in no cases, would the UCL approach the Decision Threshold.

Sample Locations

The drawing below identifies the location of each verification sample.

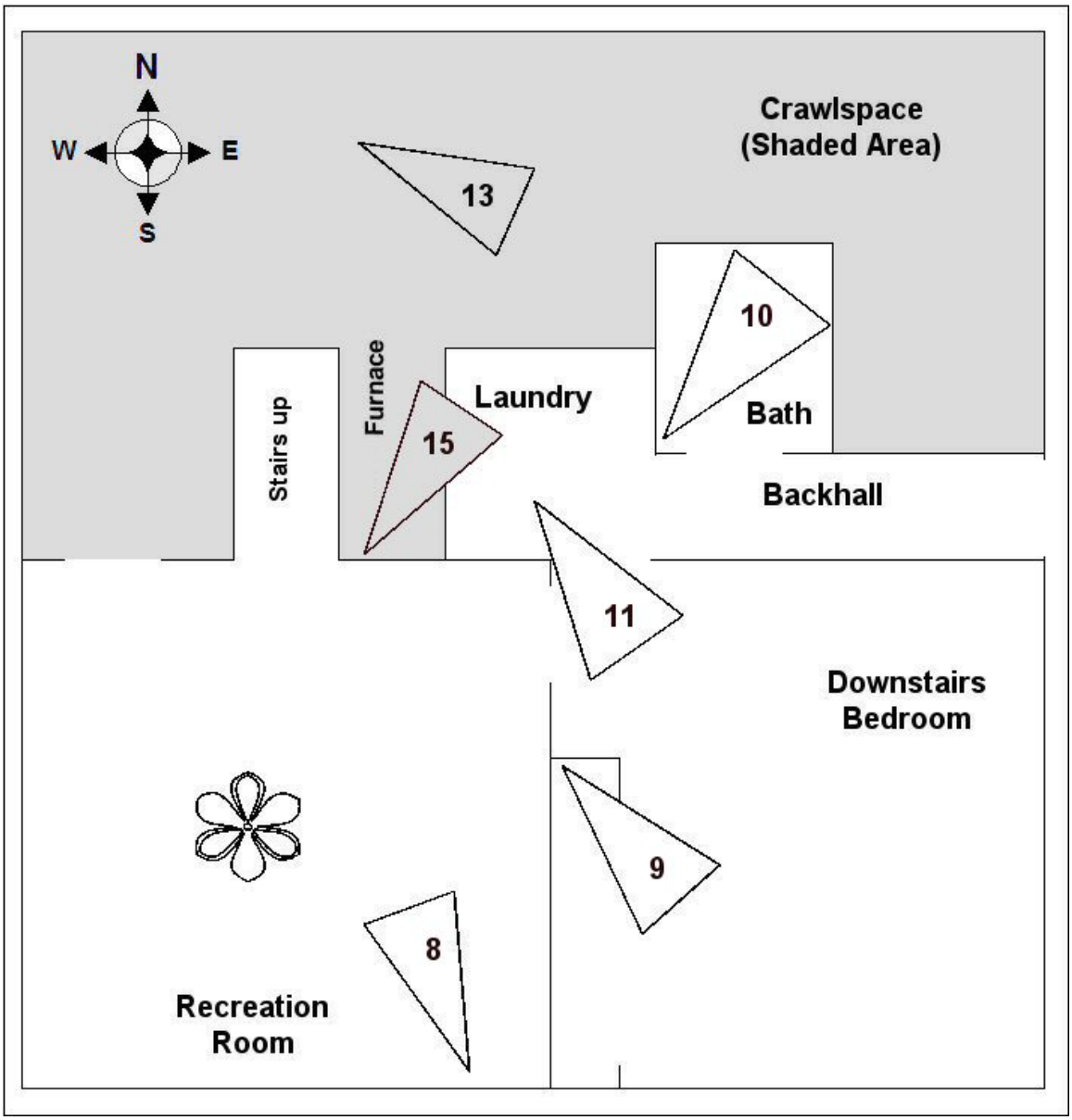


Figure 8
Locations of Final Verification Samples - Basement

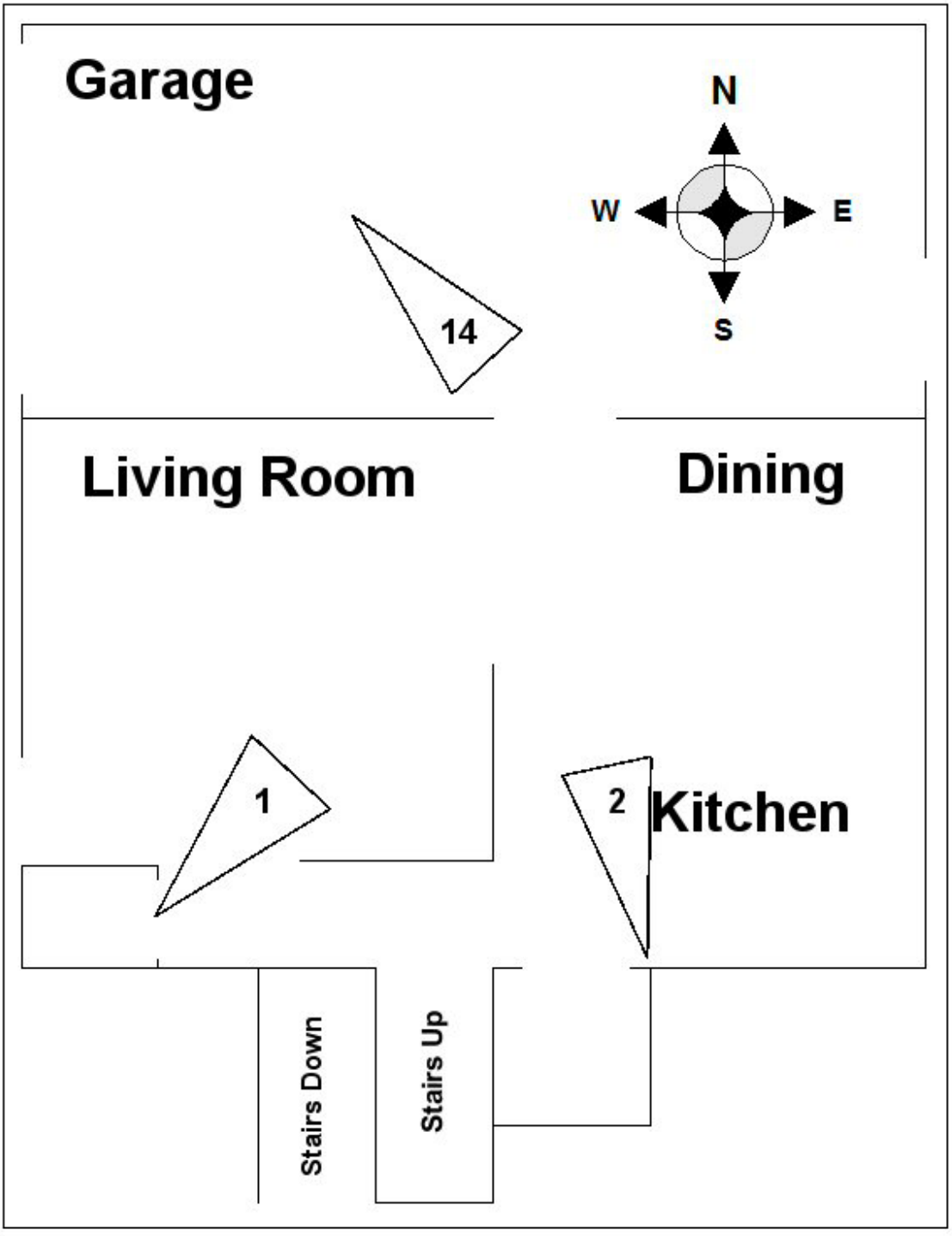


Figure 9
Locations of Final Verification Samples - Main Floor

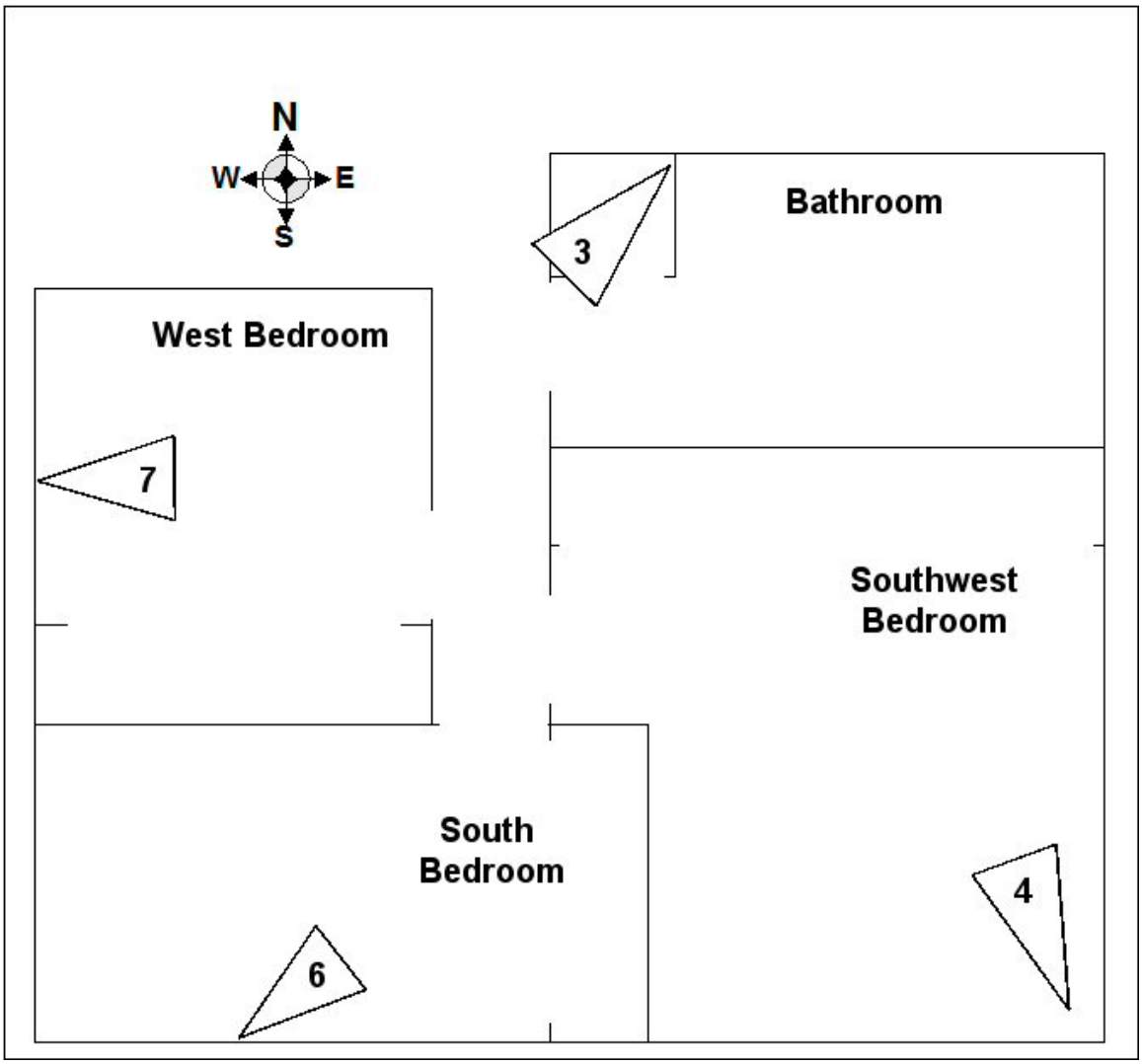


Figure 10
Locations of Final Verification Samples - Top Floor

Conclusions

Diligent adherence to the State regulations does not guarantee that a remediated property will be completely free of all residual methamphetamine. Rather, the purpose of the regulations is to ensure that properties are assessed and remediated in a consistent fashion, and that verification of remediation is performed in a scientifically valid manner.

In the absence of contradictory information, hollow wall cavities and other inaccessible places in the residence are presumed to contain *de minimis* methamphetamine residue. These residues are not considered to be toxicologically significant, and are not within the definition of "contamination" as defined by State regulation. Furthermore, these areas are reasonably considered to be "no-contact" or "low-contact" areas that do not present a reasonable probability of exposure.

Pursuant to the current state of knowledge, and pursuant to state regulations, "contaminant" is defined as "…*a chemical residue that may present an immediate or long-term threat to human health and the environment*." The risk models[21] described in the supporting documentation for 6-CCR 1014-3, suggest that exposure to *de minimis* concentrations from these areas would not reasonably pose "an immediate or long-term threat to human health and the environment" and, therefore, the presumed residues (if they exist) do not meet the definition of "contamination."

In post-decontamination sampling, the hypothesis is made that the area is non-compliant, and data are collected to test the hypothesis. The lack of data supporting the hypothesis leads the Industrial Hygienist to accept the null hypothesis and regulations require the Industrial Hygienist to thus conclude that the area is compliant.

In this case, there were no visual indicators that supported the hypothesis and the sampling failed to demonstrate that the subject property was non-compliant. As such, pursuant to 6-CCR 1014-3, we accept the null hypothesis and find the subject property at 1636 Mt. Evans Dr., Longmont, Colorado, compliant as defined in 6-CCR 1014-3. We recommend the property be immediately released for occupancy.

To avail of the civil liability immunity provided by CRS §25-18.5-103(2) and to ensure complete compliance with State regulations, this Preliminary Assessment and Decision Statement must be submitted to the Governing Body with jurisdiction over the property. Based on the best information available, The Governing Body is;

Michael Richen, CIH, Indoor Air Quality Specialist
Boulder County Public Health
Administration/Environmental Health Site
3450 Broadway
Boulder, CO 80304

FACTs has supplied a copy of this document complete with all appendices to the Governing Body via email. FACTs will forward by US Mail, the hard copy and digital disc.

[21] *Support For Selection Of A Cleanup Level For Methamphetamine At Clandestine Drug Laboratories*, Colorado Department Of Public Health And The Environment, February 2005

Appendix A:

Initial Scope of Work

FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.

Appendix A to

Preliminary Assessment of an Identified Illegal Drug Laboratory at 1636 Mount Evans Drive, Longmont, CO

Prepared for:
Stephanie J. Lujan
627 Walden Circle, Unit 105,
Boulder CO 80305

Prepared by:

FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.
185 Bounty Hunter's Lane
Bailey, CO 80421

April 30, 2010

SCOPE OF WORK

The following document is the "scope of work" that will become part of the entire Data Package of information that must be included in a Preliminary Assessment as required by Regulation 6CCR 1014-3. Due to unusual circumstances which have placed very tight time constraints on the project, this scope of work is being prepared prior to the completion of the entire data package.

During a Preliminary Assessment, samples were collected in a manner consistent with Colorado Regulation 6CCR 1014-3. 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.*"

Furthermore, pursuant to state regulations, during sampling with the intent to issue a 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.*

That is – if, in the absence of any information that would support the hypothesis that a given area is non-compliant, the sample results may be used as the exclusive evidence that the area is compliant. In this case, the sample results were as follows:

Sample Number	Sample Location	Sample Result (µg/100 cm2)
MEM042710-1	Crawlspace top of horizontal supply duct	**0.6**
MEM042710-2	Living room furnace return	**0.4**
MEM042710-3	downstairs family room ceiling fan blade	**0.3**
MEM042710-4	Upstairs hallway whole house fan duct	**0.2**
MEM042710-5	Attic galvanized cleats	**<0.02**
MEM042710-7	Garage ceiling light fixture	**0.1**
MEM042710-9	Living room closet shelf	**0.2**
MEM042710-10	Kitchen top of fridge	**<0.02**
MEM042710-11	Upstairs bathroom tops of doors	**0.1**
MEM042710-12	SE Bedroom closet shelf	**0.1**
MEM042710-13	S Bedroom closet top of doors	**0.1**
MEM042710-14	West Bedroom Closet Door Tops	**0.8**
MEM042710-15	Downstairs Bedroom room closet door tops	**0.4**
MEM042710-16	Downstairs Bathroom top of light fixture	**0.1**
MEM042710-17	Downstairs laundry room light fixture	**1.1**
MEM042710-18	Shed top of inside center rail	**<0.02**

Table 1
Summary of Results

As such, pursuant to the regulation, the Industrial Hygienist is required to consider the totality of the circumstances regarding any given property. It is well established that samples, such as those collected at the subject property, exhibit a demonstrable sampling error, that tends to be lognormally distributed. That is, there is a calculable error for every sample result, and the error tends to be relatively high. One develops "confidence" that a given sample result indicates compliance when the upper 95% confidence interval for that sample is below the regulatory compliance threshold.

In this case, as expected, the samples exhibit the expected lognormal distribution.[1] The sampling error (as determined by the data distribution) indicates that 34% of all randomly collected samples from the property would exceed the State's cleanup level.[2]

Therefore, based on the *totality of the circumstances*, FACTs concludes that there is sufficient evidence to support the initial hypothesis that several areas are non-compliant or *probably* non-compliant and some areas are *probably* compliant.

Given the calculable upper confidence intervals associated with various samples, we believe the following sample results indicate an high degree of noncompliance, even where the sample result is below the numerical value of the applicable regulatory threshold of 0.5 µg/100 cm2.

Sample Number	Sample Location	Sample Result (µg/100 cm2)
MEM042710-1	Crawlspace	**0.6**
MEM042710-2	Furnace system	**0.4**
MEM042710-3	Downstairs family room	**0.3**
MEM042710-14	West Bedroom	**0.8**
MEM042710-15	Downstairs Bedroom	**0.4**
MEM042710-17	Downstairs laundry room and hallway	**1.1**

Table 2
Summary of Results

Therefore, based on our professional interpretation of the data, in the totality of the circumstances, we conclude those areas represented by the samples in Table 2 are conclusively non-compliant or probably non-compliant and must be remediated pursuant to State Regulations.

Universal Site Requirements

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

[1] One-Tail Percentage Point of the W Test = 0.8870 and the goodness of fit W Test value for a lognormal distribution was 0.9139 whereas the goodness of fit W Test value for a Gaussian distribution was only 0.8045. Therefore, the goodness of fit was better for the lognormal distribution.

[2] If the goodness of fit W Test value for a Gaussian distribution was used, the error would indicate that 40% of the time, a randomly collected sample from the property would exceed the mandatory clean-up level.

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.

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.

5. We recommend that a decontamination corridor with showers be established 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 Longmont Police Department.

8. Discovery of any child pornography shall be immediately reported to the Colorado Springs Police Department.

9. Discovery of any controlled substances shall be immediately reported to the Colorado Springs Police Department.

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. If the air monitoring results in a concentration of greater than 120 µg methamphetamine per cubic meter, the contractor is required to upgrade respiratory protection to a minimum of either full face APR or PAPR.

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 costs of return visits by the Industrial Hygiene and sample expenses as a result of a failed final clearance.

15. State regulations prohibit painting or otherwise encapsulating surfaces prior to final clearance sampling by the Industrial Hygienist.

16. State regulations prohibit the use of strong oxidizers to mask the presence of methamphetamine, no cleaning agents greater than 5% hydrogen peroxide (or other oxidizer) are permitted on site.

17. 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 required to 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.

18. If the contractor's three QA/QC samples suggest that contamination in the subject property remains at a concentration in excess of 0.25 µg/100 cm^2, the contractor shall be contractually obligated to continue to clean, and sample, until the elevated concentrations are not observed.

19. 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.

Decontamination of The Residence

The contractor may propose removal of the furnace and associated ductwork, *in* toto, or may propose cleaning, and decontamination of the ventilation system.

The following decontamination process should take place in this order:

1. Critical barriers shall be established at each furnace supply vent and at each furnace air return vent in each area regardless of whether the room is scheduled

for remediation. No work shall occur until the critical barriers have been established.

2. Establish negative pressure in each area to be remediated pursuant to State regulations. No removal or decontamination shall occur until negative pressure is established.

3. No work, except as needed to establish critical barriers, shall begin until negative pressure is established.

4. The negative pressure must be monitored at all times at each location and must be maintained at a pressure differential of at least 0.02" WC. In the event that the pressure differential is not continuously monitored and/or the pressure differential drops to less than 0.02" WC, the contractor shall be contractually obligated to cover the costs of retesting each area adjoining the remediation area. If the follow up samples indicate contamination, the contractor will be contractually obligated to perform the decontamination at their expense.

5. Exhaust from the negative enclosure may take place at any ground level location.

6. 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. The contractor is permitted to tie-in several areas into one NAM.

7. The contractor should establish a standard, two-chambered decon and/or bag-out/load-out at the entrance to each area to be remediated.

8. A three part airlock shall be established at the crawlspace entrance. All items in the crawlspace must be wiped down in the airlock prior to being transloaded through the airlock. Otherwise unmanageable items shall be bagged and/or wrapped, or otherwise prepared to be transported into the airlock where the outside surface of the bag or wrapping can be wiped down.

9. All items in the crawlspace shall be removed and discarded.

10. The top one inch of dirt shall be excavated and removed from the crawlspace floor.

11. After the dirt has been removed, ALL surfaces in the crawlspace shall be wet wiped.

12. Any carpeting in an area to be remediated shall be steam cleaned.

13. <u>All</u> surfaces within a remediation area, including all ceilings, all hanging fixtures, all cabinets (interior and exterior surfaces), all shelving, all floors, doors, hinges,

exterior fireplaces, and every other interior surface whether specifically mentioned or not, shall be thoroughly wiped down to remove residual contamination.

14. The furnace system shall be removed or cleaned in a manner consistent with State regulations.

Prepared by,

Caoimhín P. Connell
Forensic Industrial Hygienist

Appendix B

Supporting Documents

FACTs project name: Mt. Evans	Form # ML1
Date: May 13, 2010	
Reporting IH:	Caoimhín P. Connell, Forensic IH

PROPERTY DESCRIPTION:

Physical address	1636 Mt. Evans Drive, Longmont, CO 80501-3029		
Legal description or VIN	Longmont Account #: R0042331; East Longmont Neighborhood; Parcel: 120535202007;: Hilltop Village Lg Subdivision; STR: 35-3N-69; Tax Area: 0680. Legal: Lot 13, Less Sly 2 Ft Block 5, Hilltop Village Property		
Registered Property Owner	M & E LLC, 606 Mountain View Ave, Longmont, CO 80501		
Number of structures	**Two**		
Type of Structures	1: Main Residence	2,236	Square feet
	2: Shed	108	Square feet
Adjacent and/ or surrounding properties	1: North – Single residential property		
	2: South - Single residential property		
	3: East - Single residential property		
	4: West – Street front, Mt. Evans Dr.		
General Property Observations	**Newly renovated property with new carpets, fresh paint, apparently new cabinetry.**		
Presumed Production Method	**Smoking only**		

Plumbing Inspection and Inventory

FACTs project name: Mt. Evans	Form # ML2
Date: May 13, 2010	
Reporting IH:	Caoimhín P. Connell, Forensic IH

Functional Space	Room	Fixture	Indicia?	Comments
3	Bathroom # 1	Shower	N	New paint, new cabinets
3	Bathroom # 1	Sink 1	N	
3	Bathroom # 1	Toilet	N	
9	Bathroom # 2	Shower	N	New paint, new cabinets
9	Bathroom # 2	Sink 1	N	
9	Bathroom # 2	Toilet	N	
2	Kitchen	Dishwasher	N	New paint, new cabinets
2	Kitchen	Sink #1	N	
2	Kitchen	Sink #2	N	
10	Laundry Room	Slop sink	NA	Not present
10	Laundry Room	Washing machine	NA	Not present

Ventilation Inspection and Inventory

Item	Y/N	Indicia ?	Comments
Isolated AHU?	Y	Y	No further comment
Common air intake?	N	NA	NA
Common bathroom exhausts?	N	NA	
Forced air system?	Y	Y	No further comment
Steam heat?	N	NA	NA
Common ducts to other properties?	N	NA	
Passive plena to other properties?	N	NA	
Active returns to other properties?	N	NA	
Passive wall grilles to other properties?	N	NA	
Industrial ventilation?	N	NA	
Residential ventilation?	Y	Y	No further comment
Whole house fan?	Y	Y	No further comment
Pressurized structure?	N	NA	NA

FUNCTIONAL SPACE INVENTORY

FACTs project name: Mt. Evans	Form # ML3
Date: May 13, 2010	
Reporting IH:	Caoimhín P. Connell, Forensic IH

Structure Number	Functional Space Number	Indicia (Y/N)	Describe the functional space (See drawings for delineating structural features)
1	1	Y	Living room, stairs, foyer, foyer closet, hallway
1	2	Y	Dining room and kitchen
1	3	Y	Upstairs bathroom
1	4	Y	Upstairs southeast bedroom
1	5	Y	Upstairs south bedroom
1	6	Y	Upstairs west bedroom
1	7	Y	Downstairs recreation room
1	8	Y	Downstairs bedroom
1	9	Y	Downstairs bathroom
1	10	Y	Downstairs mudroom and laundry room
1	11	Y	Crawlspace
1	12	Y	Attic #1
1	13	Y	Garage
1	14	Y	Furnace
1	15	Y	Attic #2
2	1	Y	Exterior metal shed

Law Enforcement Documentation

FACTs project name: Mt. Evans	Form # ML4
Date: May 13, 2010	
Reporting IH:	Caoimhín P. Connell, Forensic IH

Inventory of Reviewed Documents	1: No LE documents available
Described method(s) of production	None described
Chemicals identified by the LEA as being present	Methamphetamine
Cooking areas identified	None
Chemical storage areas identified	None
LE Observation on areas of contamination or waste disposal	None

FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.

April 22, 2010

Boulder County Sheriff's Office
Records Division
1777 6th Street, Boulder, CO 80302

Via Fax: (303) 441-4739

To Whom It May Concern:

Forensic Applications, Inc. has been contracted to perform a "Preliminary Assessment" an illegal drug laboratory 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 Longmont at:

1636 Mount Evans Drive, Longmont, CO
Names possibly associated with the address:
Lakesha Crutcher, Mariena Harris, Robert Wittmer

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 your office 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 Boulder County Department of Health.

We will be performing the on-site assessment on April 26, 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 <u>any</u> information considered sensitive by an investigating agency. We have developed a close working relationship with Colorado Law Enforcement Agencies, and we value and respect that open line of communication. I have included my SOQ. Please feel free to call me directly with any comments or questions. Please advise us of any fees associated with our request.

<u>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 Boulder County Sheriff's Office, such records shall not be used for the direct solicitation of business for pecuniary gain.</u>

Sincerely,

Caoimhín P. Connell
Forensic Industrial Hygienist

185 BOUNTY HUNTER'S LANE, BAILEY, COLORADO 80421
PHONE: 303-903-7494 www.forensic-applications.com

FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.

April 22, 2010

Commander Tim Lewis
City of Longmont Police Department
225 Kimbark Street
Longmont, CO 80501 USA

Via Fax: 303-774-4303

Dear Commander Lewis:

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Sincerely,

Caoimhín P. Connell
Forensic Industrial Hygienist

185 BOUNTY HUNTER'S LANE, BAILEY, COLORADO 80421
PHONE: 303-903-7494 www.forensic-applications.com

Field Observations

FACTs project name: Mt. Evans	Form # ML5
Date: May 13, 2010	
Reporting IH:	Caoimhín P. Connell, Forensic IH

Structure: 1 Main residence

Indicator	Functional Space	Indicator	Functional Space
Acids	No Comment	Marijuana	No Comment
Aerosol cans	13①	Match components	No Comment
Alcohols	No Comment	Mercury	No Comment
Ammonia	No Comment	Methamphetamine	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15
Ammunition	No Comment	Modified coolers	No Comment
Artistic expressions	No Comment	Modified electrical	No Comment
Bases	No Comment	Modified structural	No Comment
Basters/Pipettes	No Comment	Modified ventilation	No Comment
Batteries	13①	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	13①	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	2①	(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	No Comment	Staining on walls or ceiling	No Comment
Graffiti	No Comment	Staining on floors	No Comment
Heating mantle	No Comment	Stash holes	No Comment
Heet or similar	No Comment	Structural modifications	No Comment
Hydrogen peroxide	No Comment	Tubing	No Comment
Iodine	No Comment	Urine containers	No Comment
Kitty litter	11	Weapons	No Comment
Lead	No Comment	Window block material	No Comment
Lithium	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

Field Observations

FACTs project name: Mt. Evans	Form # ML5
Date: May 13, 2010	
Reporting IH:	Caoimhín P. Connell, Forensic IH

Structure: 2 Exterior shed

Indicator	Functional Space	Indicator	Functional Space
Acids	No Comment	Marijuana	No Comment
Aerosol cans	No Comment	Match components	No Comment
Alcohols	No Comment	Mercury	No Comment
Ammonia	No Comment	Methamphetamine	1
Ammunition	No Comment	Modified coolers	No Comment
Artistic expressions	No Comment	Modified electrical	No Comment
Bases	No Comment	Modified structural	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	No Comment	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	No Comment	Staining on walls or ceiling	No Comment
Graffiti	No Comment	Staining on floors	No Comment
Heating mantle	No Comment	Stash holes	No Comment
Heet or similar	No Comment	Structural modifications	No Comment
Hydrogen peroxide	No Comment	Tubing	No Comment
Iodine	No Comment	Urine containers	No Comment
Kitty litter	No Comment	Weapons	No Comment
Lead	No Comment	Window block material	No Comment
Lithium	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

CONTAMINANT MIGRATION OBSERVATIONS

FACTs project name: Mt. Evans	Form # ML6
Date: May 13, 2010	
Reporting IH:	Caoimhín P. Connell, Forensic IH

Describe/identify adjacent areas where contaminants may have migrated.

No evidence of contamination migration was observed.

See body of report for considerations.

Each grid equals approximately _____ (Approximate lay-out; Not to scale)

Describe the area:_____

_____

_____

_____

Individual Sewage Disposal System Field Form

FACTs project name: Mt. Evans	Form # ML7
Date: May 13, 2010	
Reporting IH:	Caoimhín P. Connell, Forensic IH

	Y/N	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 blank	

Location	MOS*	PID*	FID*
This section blank			

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

Notes

Pre-Remediation Photograph Log Sheet

FACTs project name: Mt. Evans	Form # ML8
Date: May 13, 2010	
Reporting IH:	Caoimhín P. Connell, Forensic IH

Name	Date taken
Attic No 1 (2)	4/27/2010 11:17
attic No 1 (3)	4/27/2010 11:18
Attic No 1 (6)	4/27/2010 11:21
Attic No 1 (7)	4/27/2010 11:21
Attic No 1	4/27/2010 11:15
Attic No 2 (2)	4/27/2010 11:57
Attic No 2 (3)	4/27/2010 11:58
Attic No 2 (4)	4/27/2010 11:58
Attic No 2 (5)	4/27/2010 11:58
Attic No 2 (6)	4/27/2010 11:56
Attic No 2	4/27/2010 11:57
conf plumbing	4/27/2010 10:42
conf plumbing (2)	4/27/2010 10:41
conf plumbing (3)	4/27/2010 10:41
conf plumbing (4)	4/27/2010 10:41
conf plumbing (5)	4/27/2010 10:41
conf plumbing (6)	4/27/2010 10:41
conf plumbing (7)	4/27/2010 10:42
conf plumbing (8)	4/27/2010 10:42
conf plumbing (9)	4/27/2010 10:42
conf plumbing (10)	4/27/2010 10:43
conf plumbing (11)	4/27/2010 10:43
conf plumbing (12)	4/27/2010 10:43
conf plumbing (13)	4/27/2010 10:43
conf plumbing (14)	4/27/2010 10:43

Name	Date taken
crawlspace	4/27/2010 10:36
crawlspace (2)	4/27/2010 10:51
crawlspace (3)	4/27/2010 10:51
crawlspace (4)	4/27/2010 10:52
crawlspace (5)	4/27/2010 10:52
crawlspace (6)	4/27/2010 10:52
crawlspace (7)	4/27/2010 10:53
crawlspace (8)	4/27/2010 10:53
crawlspace (9)	4/27/2010 10:59
crawlspace (10)	4/27/2010 10:59
Dining room	4/27/2010 10:29
dining room (2)	4/27/2010 10:29
dining room (3)	4/27/2010 10:40
downstairs bath	4/27/2010 10:36
downstairs bath (2)	4/27/2010 10:35
downstairs bath (3)	4/27/2010 10:35
downstairs bath (4)	4/27/2010 10:35
DS Bedroom	4/27/2010 10:35
DS Bedroom (2)	4/27/2010 10:34
DS Bedroom (3)	4/27/2010 10:34
DS Bedroom (4)	4/27/2010 10:34
Exterior	4/27/2010 10:17
exterior (2)	4/27/2010 10:18
exterior (3)	4/27/2010 10:18
exterior (4)	4/27/2010 10:19

Pre-Remediation Photograph Log Sheet

FACTs project name: Mt. Evans	Form # ML8
Date: May 13, 2010	
Reporting IH:	Caoimhín P. Connell, Forensic IH

Name	Date taken
exterior (5)	4/27/2010 10:36
exterior (6)	4/27/2010 10:36
exterior (7)	4/27/2010 12:25
exterior (8)	4/27/2010 12:25
exterior (9)	4/27/2010 12:25
exterior (10)	4/27/2010 12:25
exterior (11)	4/27/2010 12:25
exterior (12)	4/27/2010 12:25
exterior (13)	4/27/2010 12:25
exterior (14)	4/27/2010 12:26
exterior (15)	4/27/2010 12:26
exterior (16)	4/27/2010 12:45
exterior (17)	4/27/2010 12:45
front door	4/27/2010 10:30
garage	4/27/2010 10:36
garage (2)	4/27/2010 10:37
garage (3)	4/27/2010 10:37
garage (4)	4/27/2010 10:37
garage (5)	4/27/2010 10:37
garage (6)	4/27/2010 10:37
garage (7)	4/27/2010 10:37
garage (8)	4/27/2010 10:37
garage (9)	4/27/2010 10:38
garage (10)	4/27/2010 10:38
garage (11)	4/27/2010 10:38

Name	Date taken
garage (12)	4/27/2010 10:38
garage (13)	4/27/2010 10:39
garage (14)	4/27/2010 11:14
kitchen	4/27/2010 10:27
kitchen (2)	4/27/2010 10:29
kitchen (3)	4/27/2010 10:29
kitchen (4)	4/27/2010 10:30
kitchen (5)	4/27/2010 10:30
kitchen (6)	4/27/2010 10:37
kitchen (7)	4/27/2010 10:39
kitchen (8)	4/27/2010 10:40
kitchen (9)	4/27/2010 11:40
kitchen (10)	4/27/2010 11:41
Kitchen (11)	4/27/2010 11:38
kitchen (12)	4/27/2010 10:40
kitchen (13)	4/27/2010 10:40
kitchen (14)	4/27/2010 10:28
ladder decon	4/27/2010 08:54
ladder decon (2)	4/27/2010 08:55
ladder decon (3)	4/27/2010 08:55
ladder decon (4)	4/27/2010 08:55
ladder decon (5)	4/27/2010 08:56
ladder decon (6)	4/27/2010 08:58
ladder decon (7)	4/27/2010 08:58
laundry room	4/27/2010 10:35

Pre-Remediation Photograph Log Sheet

FACTs project name: Mt. Evans	Form # ML8
Date: May 13, 2010	
Reporting IH:	Caoimhín P. Connell, Forensic IH

Name	Date taken	Name	Date taken
laundry room (2)	4/27/2010 10:35	sample 4 (3)	4/27/2010 11:09
living room	4/27/2010 10:27	sample 4	4/27/2010 11:07
living room (2)	4/27/2010 10:28	sample 5 (2)	4/27/2010 11:18
living room (3)	4/27/2010 10:29	sample 5	4/27/2010 11:18
Living room (4)	4/27/2010 10:29	sample 7 (2)	4/27/2010 11:27
Mud room	4/27/2010 10:36	sample 7 (4)	4/27/2010 11:27
Mudroom	4/27/2010 10:35	sample 7	4/27/2010 11:26
Recreation room	4/27/2010 10:44	sample 9 (2)	4/27/2010 11:36
Recreation Room (2)	4/27/2010 10:34	sample 9 (3)	4/27/2010 11:36
Recreation Room (3)	4/27/2010 10:34	sample 9 (4)	4/27/2010 11:36
Recreation Room (4)	4/27/2010 10:34	sample 9	4/27/2010 11:34
Recreation Room (5)	4/27/2010 10:34	sample 10 (2)	4/27/2010 11:43
Recreation Room (6)	4/27/2010 10:33	sample 10 (3)	4/27/2010 11:43
Rrecreation room	4/27/2010 10:28	sample 10	4/27/2010 11:43
sample 1 (2)	4/27/2010 10:52	sample 11 (2)	4/27/2010 11:54
sample 1 (3)	4/27/2010 10:53	sample 11	4/27/2010 11:54
sample 1	4/27/2010 10:52	sample 12 (2)	4/27/2010 12:00
sample 2 (2)	4/27/2010 11:06	sample 12 (3)	4/27/2010 12:00
sample 2 (3)	4/27/2010 11:07	sample 12	4/27/2010 11:59
sample 2 (4)	4/27/2010 11:07	sample 13 (2)	4/27/2010 12:04
sample 2	4/27/2010 11:05	sample 13 (3)	4/27/2010 12:04
sample 3 (2)	4/27/2010 11:03	sample 13	4/27/2010 12:04
sample 3 (3)	4/27/2010 11:03	sample 14 (2)	4/27/2010 12:07
sample 3	4/27/2010 11:03	sample 14 (3)	4/27/2010 12:07
sample 4 (2)	4/27/2010 11:07	sample 14 (4)	4/27/2010 12:08

Pre-Remediation Photograph Log Sheet

FACTs project name: Mt. Evans	Form # ML8
Date: May 13, 2010	
Reporting IH:	Caoimhín P. Connell, Forensic IH

Name	Date taken
sample 14	4/27/2010 12:06
sample 15 (2)	4/27/2010 12:10
sample 15 (3)	4/27/2010 12:10
sample 15	4/27/2010 12:10
sample 16 (2)	4/27/2010 12:12
sample 16 (3)	4/27/2010 12:14
sample 16 (4)	4/27/2010 12:14
sample 16	4/27/2010 12:12
sample 17 (2)	4/27/2010 12:18
sample 17	4/27/2010 12:17
sample 18 (2)	4/27/2010 12:23
sample 18 (3)	4/27/2010 12:23
sample 18	4/27/2010 12:23
SE Bedroom	4/27/2010 10:31
SE Bedroom (3)	4/27/2010 10:31
SE Bedroom (4)	4/27/2010 10:31
SE Bedroom (5)	4/27/2010 10:31
SE Bedroom (6)	4/27/2010 10:32
SE Bedroom (7)	4/27/2010 10:32
SE Bedroom (8)	4/27/2010 10:32
SE Bedroom (9)	4/27/2010 10:32
shed	4/27/2010 12:22
shed (2)	4/27/2010 12:22
shed (3)	4/27/2010 12:22
shed (4)	4/27/2010 12:22

Name	Date taken
shed (5)	4/27/2010 12:24
so bedroom (3)	4/27/2010 10:33
South Bedroom	4/27/2010 10:33
South Bedroom (2)	4/27/2010 10:33
South Bedroom (3)	4/27/2010 10:33
South bedroom (4)	4/27/2010 12:03
Stairs	4/27/2010 10:45
Stairs (2)	4/27/2010 10:45
Stairs (3)	4/27/2010 10:33
Stairs (4)	4/27/2010 10:33
stairs up (2)	4/27/2010 10:30
Surgical gloves	4/27/2010 12:37
surgical gloves (2)	4/27/2010 12:37
US Bath	4/27/2010 10:31
US Bath (2)	4/27/2010 10:31
US Bath (3)	4/27/2010 10:31
US Bath (4)	4/27/2010 10:31
US Bath (5)	4/27/2010 10:30
US Bath (6)	4/27/2010 10:30
US Bath (7)	4/27/2010 10:30
Walkthrough	
Walkthrough.THM	
Walkthrough (2)	
Walkthrough (2).THM	
west bedroom	4/27/2010 10:32

Post-Remediation Photograph Log Sheet

FACTs project name: Mt. Evans	Form # ML9
Date: May 13, 2010	
Reporting IH:	Caoimhín P. Connell, Forensic IH

Name	Date taken
conf plumbing	5/11/2010 16:58
conf plumbing (2)	5/11/2010 16:58
conf plumbing (3)	5/11/2010 16:59
crawlspace	5/11/2010 17:00
DS bath	5/11/2010 17:01
DS bath (2)	5/11/2010 17:01
DS Bedroom	5/11/2010 17:00
DS Bedroom (2)	5/11/2010 17:00
DS bedroom (3)	5/11/2010 16:47
exterior	5/11/2010 17:07
exterior (2)	5/11/2010 17:07
exterior (3)	5/11/2010 17:07
exterior (4)	5/11/2010 17:07
exterior (5)	5/11/2010 17:07
exterior (6)	5/11/2010 17:08
exterior (7)	5/11/2010 17:08
exterior (8)	5/11/2010 17:08
exterior (9)	5/11/2010 17:08
exterior (10)	5/11/2010 17:08
exterior (11)	5/11/2010 17:08
exterior (12)	5/11/2010 17:08
garage	5/11/2010 16:58
garage (2)	5/11/2010 16:58
kitchen	5/11/2010 15:34
kitchen (2)	5/11/2010 15:35

Name	Date taken
kitchen NegAir	5/11/2010 15:33
Kitchen NegAir (2)	5/11/2010 16:57
ladder decon	5/11/2010 14:06
ladder decon (2)	5/11/2010 14:07
ladder decon (3)	5/11/2010 14:07
ladder decon (4)	5/11/2010 14:07
laundry	5/11/2010 17:00
laundry (2)	5/11/2010 17:01
Living room	5/11/2010 16:58
living room (2)	5/11/2010 16:57
Mud room	5/11/2010 17:00
Mud room (2)	5/11/2010 15:18
MVI_9089	
MVI_9089.THM	
NegAir Reading	5/11/2010 16:08
NegAir Reading (2)	5/11/2010 16:06
Recreation Room	5/11/2010 17:00
Recreation Room (2)	5/11/2010 17:00
sample 1 (2)	5/11/2010 15:32
sample 1	5/11/2010 15:32
sample 2 (2)	5/11/2010 15:38
sample 2	5/11/2010 15:38
sample 3 (2)	5/11/2010 15:44
sample 3	5/11/2010 15:44
sample 4 (2)	5/11/2010 15:51

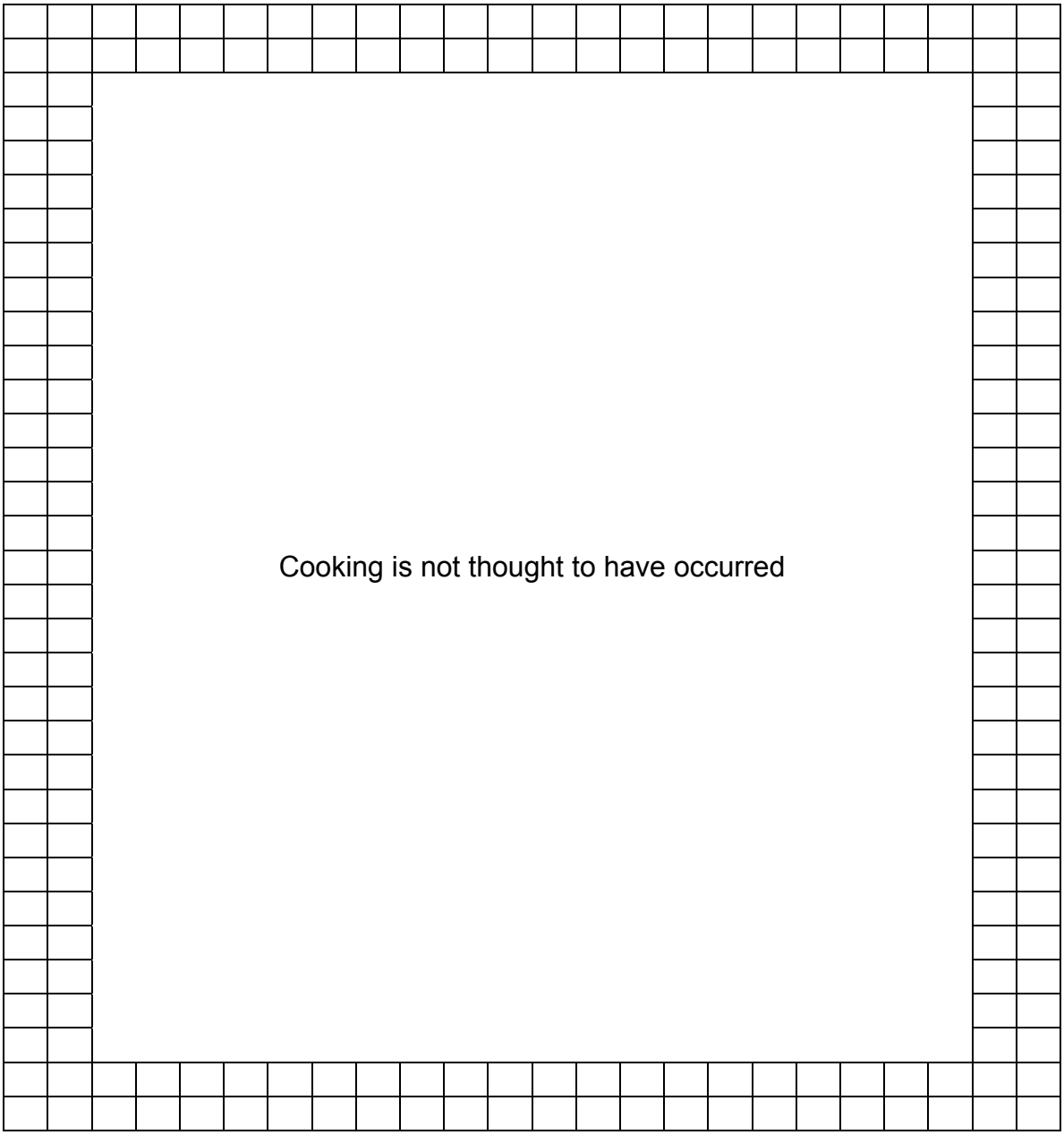
Post-Remediation Photograph Log Sheet

FACTs project name: Mt. Evans	Form # ML9
Date: May 13, 2010	
Reporting IH:	Caoimhín P. Connell, Forensic IH

Name	Date taken
sample 4 (3)	5/11/2010 15:52
sample 4	5/11/2010 15:51
sample 6 (2)	5/11/2010 15:56
sample 6	5/11/2010 15:55
sample 7 (2)	5/11/2010 15:59
sample 7	5/11/2010 15:58
sample 8	5/11/2010 16:32
sample 9 (2)	5/11/2010 16:49
sample 9	5/11/2010 16:49
sample 10	5/11/2010 16:27
sample 11 (2)	5/11/2010 16:16
sample 11 (3)	5/11/2010 16:23
sample 11	5/11/2010 16:16
sample 13 (2)	5/11/2010 16:34
sample 13	5/11/2010 16:34
sample 14	5/11/2010 16:54
sample 15 (2)	5/11/2010 16:37
sample 15	5/11/2010 16:37
se bdrm NegAir	5/11/2010 16:59
se bedroom	5/11/2010 15:48
se bedroom (2)	5/11/2010 15:48
se bedroom (3)	5/11/2010 16:59
so bedroom	5/11/2010 16:59
so bedroom (2)	5/11/2010 16:59
so bedroom (3)	5/11/2010 16:59
South Bedroom	5/11/2010 16:59
stairs	5/11/2010 17:01
stairs (2)	5/11/2010 16:58
Surgical gloves	5/11/2010 16:57
US bath	5/11/2010 16:58
US Hall	5/11/2010 16:59
Video walkthrough	
Video walkthrough.THM	
w bedroom	5/11/2010 16:59
W bedroom (2)	5/11/2010 16:59

Drawing of Cook Area(s)

FACTs project name: Mt. Evans	Form # ML10
Date: May 13, 2010	
Reporting IH:	Caoimhín P. Connell, Forensic IH



Each grid equals approximately _____ (Approximate lay-out; Not to scale)

Describe the area:_____

_____

_____

_____

Drawing of Storage/Disposal Area(s)

FACTs project name: Mt. Evans	Form # ML11
Date: May 13, 2010	
Reporting IH:	Caoimhín P. Connell, Forensic IH

Waste disposal and storage areas are not determinable

Each grid equals approximately _____ (Approximate lay-out; Not to scale)

Describe the area:_____

_____

_____

_____

Drawing of General Lab Area

FACTs project name: Mt. Evans	Form # ML12
Date: May 13, 2010	
Reporting IH:	Caoimhín P. Connell, Forensic IH

See body of report

Each grid equals approximately _____ (Approximate lay-out; Not to scale)

Describe the area:_____

_____

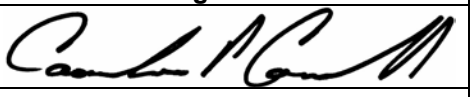
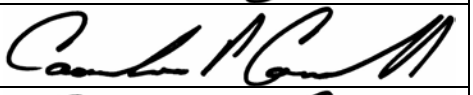
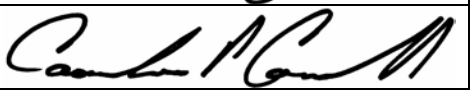
_____

_____

CERTIFICATION, VARIATIONS AND SIGNATURE SHEET

FACTs project name: Mt. Evans	**Form # ML14**
Date: May 13, 2010	
Reporting IH:	**Caoimhín 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.~~	XXXXXXXXXXXXXXX
I do hereby certify that I conducted post-decontamination clearance sampling in accordance with 6 CCR 1014-3, §6.	
I do hereby certify that the cleanup standards established by 6 CCR 1014-3, § 7 have been met as evidenced by testing I conducted.	
I do hereby certify that the analytical results reported here are faithfully reproduced.	

In the section below, describe any variations from the standard.
See body of report.

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 13, 2010

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:	**Mt Evans**	**Form # ML15**
Date May 13, 2010		
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. 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 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; 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 will be conducting the AIHA 2010 Clandestine Drug Lab Professional Development Course.

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 condominia. Mr. Connell has conducted over 170 assessments in illegal drug labs, and collected over 1,600 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

FACTs project name: Mt. Evans	Form # ML16
Date: May 13, 2010	
Reporting IH:	Caoimhín P. Connell, Forensic IH

Mandatory Final Documents 6-CCR 1014-3	DOCUMENTATION	Included
§8.1	Property description field form	✓
§8.2	Description of manufacturing methods and chemicals	✓
§8.3	Law Enforcement documentation review discussion	✓
§8.4	Description and Drawing of Storage area(s)	✓
§8.5	Description and Drawing of Waste area(s)	✓
§8.6	Description and Drawing of Cook area(s)	✓
§8.7	Field observations field form	✓
	FACTs Functional Space inventory field form	✓
§8.8	Plumbing inspection field form	✓
	FACTs ISDS field form	✓
§8.9	Contamination migration field form	✓
§8.10	Identification of common ventilation systems	✓
§8.11	Description of the sampling procedures and QA/QC	✓
§8.12	Analytical Description and Laboratory QA/QC	✓
§8.13	Location and results of initial sampling with figure	✓
§8.14	FACTs health and safety procedures in accordance with OSHA	✓
§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	✓
§8.20	FACTs Pre-remediation photographs and log	✓
	FACTs Post-remediation photographs and log	NA
§8.21	FACTs SOQ	✓
§8.22	Certification of procedures, results, and variations	✓
§8.23	Mandatory Certification Language	✓
§8.24	Signature Sheet	✓
	Analytical Laboratory Reports	✓
	FACTs Field Sampling Forms	✓

4850 Jackson Street
Denver, CO 80216
Phone Number: 303-778-6000
Fax Number: 303-778-1304

Project Address:

1636 Mount Evans Drive
Longmont, CO 80501

Decontamination of the Residence

Before work began on the property critical barriers were set up. All duct supply and return vents were sealed off and furnace was unplugged. A three chamber decon and or bag-out/load out chamber was installed at the entrance to the crawl space. A two chamber decon and or bag-out/load out chamber was installed at the rear entrance of the house. Two 2000 cfm negative air machines were installed. One machine was installed in the Dining room on the main level and one in the upper southeast bedroom both venting to the east of the house. One more 1000 cfm negative air machine was installed in the crawl space venting to the east of the house. Negative air was established in the residence before any cleaning began.

In a manner consistent with State regulations all workers were wearing full face APRs with an approved Tyvek hazmat suit, 13 mil gloves and booties. PPE was worn and maintained until the residence was decontaminated.

In a manner consistent with State regulations the residence was decontaminated. Work began in the upper southeast bedroom. There was attic access; however no cleaning occurred in the attic. The entire inside of the residence surfaces i.e. walls, floors and ceiling, doors, light fixtures, windows, vents, switches, hinges, cabinets, showers, appliances, handrails, were washed with a solution of soapy water and not more than a 2% HO. Walls and ceilings were washed starting at the highest point cleaning top to bottom in short vertical strokes in a left to right pattern. Rags were divided into a square and were hand wiped in short stroked used once and a new side of the rag was used. Each rag was used only four times insuring that a clean surface was used on each wipe so no cross contamination could occur. The rooms were cleaned in the following order, upper southeast bedroom, southwest bedroom, upper bathroom, northwest bedroom, upper hallway, lower southeast bedroom, lower bathroom, lower hallway/laundry room. The crawl space was being decontaminated at the same time. When the crawlspace was finished the three part air chamber was taken down and disposed of and the supports cleaned. Next the family room was cleaned, followed by the entryway, living room kitchen and dining room. The wall to wall carpets were then steam cleaned; carpets were pre-treated with a solution of traffic lane cleaner and 2% HO.

The drywall in the interior of the garage was hand wiped and the protected with polyethylene sheeting while the rest of the garage was pressure washed with hot water and pre treated with a

soapy water and 2% HO solution. Heaters were installed in the garage as well as dehumidifiers and fans to dry the garage due to a late spring snow storm. These items were only installed for drying after “FACTS” had taken the necessary samples for retesting of the residence.

In the crawl space all debris was removed. The top one inch of dirt in the crawl space was excavated and disposed of in the fashion mentioned above. All floor joists, cross members, wires, vents, foundation wall and footers were cleaned with our solution. In some cases in the crawl space the ledges and nooks and crannies were hepa vacuumed and re-washed to obtain a clean surface. A new vapor barrier of 6 mil black polyethylene sheeting was installed in the crawl space, but was not attached to the walls for inspected purposes were do not intend to attached the vapor barrier to the concrete walls.

The furnace and duct system was the last item to be cleaned. The HVAC system was cleaned in a manner consistent with State regulations.

The plumbing system was flushed with water for not less that three hours per a fixture with moderate water flow. Care was taken that all strainer baskets, plungers and mouths of the drains that could be reasonable cleaned by hand were hand wiped. All plumbing fixtures were cleaned interior and exterior, toilets were flushed no less than 5 times each.

The shed was not part of our decontamination of the residence.

All debris or waste was thrown away in a 4 mil trash bag and double bagged and goose-necked and tapped shut. If the item would not fit in a trash bag; the item was double burrito wrapped in 6 mil polyethylene sheeting and tapped closed. The outside of the waste was wiped with the previously mentioned cleaning solution before disposal in our secure portable waste container. No waste manifest was generated during the course of the decontamination of the residence.

No child pornography was found during the decontamination.

No controlled substances found during the decontamination.

This concludes of submittal for the decontamination of the residence. Please do not hesitate to call if you have questions or concerns or wish to have any part of our decontamination of the residence expanded or clarified.

Prepared by,

Jacob George
Director of Operations
Insure Fire and Water Restoration, Inc.

Appendix C

Analytical Reports

Sampling Field Form

FACTs project name: Mt. Evans	**Form # ML17**
Date: April 27, 2010	**Alcohol Lot#: AØ9Ø1 Gauze Lot#: G1ØØ2**
Reporting IH: Caoimhín P. Connell, Forensic IH	**Preliminary X Intermediate____ Final____**

Sample ID MEMØ4271Ø-	Type	Location	Funct. Space	Dimensions (Inches)	Substrate
1	W	Crawlspace, top of air duct	11	9 X 9	M
2	W	Furnace system: Return air grille in living room	14	14 X 8	M
3	W	DS Recreation Room: Ceiling fan blade	7	See Notes	LW
4	W	Attic #2: Whole house fan duct interior	15	9 X 9	Pl
5	W	Attic #1: Roof truss cleats	12	(5" X 4") X 4	M
6	W	Field BX	-	NA	NA
7	W	Garage: Top of fluorescent light fixture	13	40 X 2.5	M
8	W	Field BX	-	NA	NA
9	W	Living room: Top of closet shelf	1	9 X 9	VW
10	W	Kitchen Top of fridge	2	9 X 9	PM
11	W	Upstairs bathroom tops of doors	3	(24X1.3) X 2	PW
12	W	SE Bedroom, top of shelf in closet	4	9 X 9	W
13	W	South Bedroom, top of closet doors	5	(30X1.5) X 2	VW
14	W	West Bedroom, top of closet doors	6	(30X1.5) X 2	VW
15	W	DS Bedroom, top of closet doors	8	(36X1.5) X 2	VW

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, Pl=Plastic
Sample #3 Trapezoid: b1: 4.5"; b2: 5.5" h 18"

Sampling Field Form

FACTs project name: Mt. Evans	**Form # ML17**
Date: April 27, 2010	**Alcohol Lot#: AØ9Ø1 Gauze Lot#: G1ØØ2**
Reporting IH: Caoimhín P. Connell, Forensic IH	**Preliminary X Intermediate____ Final____**

Sample ID MEMØ4271Ø-	Type	Location	Funct. Space	Dimensions (Inches)	Substrate
16	W	DS Bathroom, light fixture over sink	9	(3X14)X2	G
17	W	Downstairs laundry room light fixture	10	See Notes	M
18	W	Shed top rail center beam	2-1	1X80	M

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, Pl=Plastic

Sample 17: Inches - ((0.75)X48)X2

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Established in 1979

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Tukwila WA 98168-3240

Website: www.acilabs.com

Phone: 206-622-8353
E-mail: info@acilabs.com

Lab Reference:	10125-01
Date Received:	April 29, 2010
Date Completed:	April 30, 2010

April 30, 2010

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

CLIENT REF: Mt. Evans Dr.

SAMPLES: wipes/18

ANALYSIS: Methamphetamine by Gas Chromatography-Mass Spectrometry.

RESULTS: in total micrograms (ug)

Sample	*Methamphetamine, ug*	*% Surrogate Recovery*
MEM042710-01	3.36	93
MEM042710-02	2.77	92
MEM042710-03	1.47	98
MEM042710-04	1.11	90
MEM042710-05	0.036	95
MEM042710-06	< 0.030	95
MEM042710-07	0.659	99
MEM042710-08	< 0.030	98
MEM042710-09	0.922	97
MEM042710-10	0.048	100
MEM042710-11	0.250	98
MEM042710-12	0.527	88
MEM042710-13	2.34	99
MEM042710-14	4.13	96
MEM042710-15	2.76	98
MEM042710-16	0.449	97
MEM042710-17	5.10	99
MEM042710-18	0.031	82
QA/QC Method Blank	< 0.004	
QC 2.00 ug Standard	1.89	
QA 0.020 ug Matrix Spike	0.022	
QA 0.020 ug Matrix Spike Duplicate	0.020	
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

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FAX: 206-622-4623

CDL SAMPLING & CUSTODY FORM

Please do not write in shaded areas.

SAMPLING DATE:	April 27,2010	REPORT TO:	Caoimhín P. Connell	ANALYSIS REQUESTED	
PROJECT Name/No:	Mt. Evans Dr.	COMPANY:	Forensic Applications, Inc.	1	Methamphetamine
eMail:	Fiosrach@aol.com	ADDRESS:	185 Bounty Hunters Lane, Bailey, CO 80421	2	Use entire contents
SAMPLER NAME:	Caoimhín P. Connell	PHONE	303-903-7494	3	24 HOUR RUSH
				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			
	MEMØ4271Ø-Ø1	X			X	X	X						1
	MEMØ4271Ø-Ø2	X			X	X	X						1
	MEMØ4271Ø-Ø3	X			X	X	X						1
	MEMØ4271Ø-Ø4	X			X	X	X						1
	MEMØ4271Ø-Ø5	X			X	X	X						1
	MEMØ4271Ø-Ø6	X			X	X	X						1
	MEMØ4271Ø-Ø7	X			X	X	X						1
	MEMØ4271Ø-Ø8	X			X	X	X						1
	MEMØ4271Ø-Ø9	X			X	X	X						1
	MEMØ4271Ø-1Ø	X			X	X	X						1

CHAIN OF CUSTODY RECORD — **Wipes Results in:** ☐ µg/100cm² ☒ Total µg — **Total Number of Containers** (verified by laboratory): 10

PRINT NAME	Signature	COMPANY	DATE	TIME	Turnaround Time	Custody Seals:	Yes	No
Caoimhín P. Connell		FACTs, Inc.			☒ 24 Hours (2X)	Container:	Intact	Broken
MIA SAZON		ACI	4/29/10	1500	☐ 2 Days (1.75X)	Temperature:	Ambient	Cooled
					☐ 3 Days (1.5X)	Inspected By:	MIA SAZON	
					☒ Routine	Lab File No.	10125-01	

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

CDL SAMPLING & CUSTODY FORM

Please do not write in shaded areas.

SAMPLING DATE:	April 27,2010	REPORT TO:	Caoimhín P. Connell
PROJECT Name/No:	Mt. Evans Dr.	COMPANY:	Forensic Applications, Inc.
eMail:	Fiosrach@aol.com	ADDRESS:	185 Bounty Hunters Lane, Bailey, CO 80421
SAMPLER NAME:	Caoimhín P. Connell	PHONE	303-903-7494

ANALYSIS REQUESTED

1	Methamphetamine
2	Use entire contents
3	24 Hour RUSH
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			
	MEMØ4271Ø-11	X			X	X	X						1
	MEMØ4271Ø-12	X			X	X	X						1
	MEMØ4271Ø-13	X			X	X	X						1
	MEMØ4271Ø-14	X			X	X	X						1
	MEMØ4271Ø-15	X			X	X	X						1
	MEMØ4271Ø-16	X			X	X	X						1
	MEMØ4271Ø-17	X			X	X	X						1
	MEMØ4271Ø-18	X			X	X	X						1
	MEMØ4271Ø-19	X			X	X				X			
	MEMØ4271Ø-2Ø	X			X	X				X			

CHAIN OF CUSTODY RECORD

Wipes Results in: ☐ µg/100cm² ☒ Total µg

Total Number of Containers (verified by laboratory): 8

PRINT NAME	Signature	COMPANY	DATE	TIME	Turnaround Time
Caoimhín P. Connell		FACTs, Inc.	04/28/10	0730	☒ 24 Hours (2X)
MIA SAZON		ACI	4/29/10	1500	☐ 2 Days (1.75X)
					☐ 3 Days (1.5X)
					☒ Routine

Custody Seals:	Yes	No
Container:	Intact	Broken
Temperature:	Ambient	Cooled
Inspected By:	MIA SAZON	
Lab File No.	10125-01	

Sampling Field Form

FACTs project name: Mt. Evans	**Form # ML17**
Date: May 11, 2010	**Alcohol Lot#: AØ9Ø1 Gauze Lot#: G1ØØ3**
Reporting IH: Caoimhín P. Connell, Forensic IH	**Preliminary _____ Intermediate____ Final X**

Sample ID MEMØ5111Ø-	Type	Location	Funct. Space	Dimensions	Substrate
-Ø1	W	Foyer: Exterior of closet door in the foyer	1	9” X 9”	PW
-Ø2	W	Kitchen: South wall of kitchen. Ceramic tile by fridge	2	9” X 9”	C
-Ø3	W	US Bathroom, east wall at floor inside the linen closet	3	9” X 9”	PDW
-Ø4	W	SE Bedroom, floor in the southeast corner	4	9” X 9”	VW
-Ø5	W	Field Blank	-	-	NA
-Ø6	W	South bedroom: South wall window sill	5	3.5” X 25”	Epoxy
-Ø7	W	West bedroom: West wall window sill	6	3.5” X 25”	Epoxy
-Ø8	W	Recreation room: Top of wood burning stove	7	9” X 9”	M
-Ø9	W	DS Bedroom, inside closet, NW ceiling at west wall	8	9” X 9”	PDW
-1Ø	W	DS Bathroom: West wall south corner at floor	9	9” X 9”	PDW
-11	W	Mudroom- Laundry: Light fixture in laundry area	10	2.35” X 40”	M
-12	W	Field Blank	-	-	NA
-13	W	Crawlspace, top of air duct	11	8” X 14”	M
-14	W	Garage: Top of garage door opening mechanism	13	See note	M
-15	W	Furnace interior: Exterior housing of fan	14	See note	M

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, Pl=Plastic
Sample 14: Dimensions in inches: (13X10)-(2.5X10)
Sample 15: Dimensions in inches: (3X6)+(7X3.5)+(7X5)+(7X5.5)

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Website: www.acilabs.com

Phone: 206-622-8353
E-mail: info@acilabs.com

Lab Reference:	10127-04
Date Received:	May 12, 2010
Date Completed:	May 13, 2010

May 13, 2010

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

CLIENT REF: Mt Evans

SAMPLES: wipes/15

ANALYSIS: Methamphetamine by Gas Chromatography-Mass Spectrometry.

RESULTS: in total micrograms (ug)

Sample	***Methamphetamine, ug***	***% Surrogate Recovery***
MEM051110-01	0.199	93
MEM051110-02	< 0.030	94
MEM051110-03	0.046	91
MEM051110-04	0.126	95
MEM051110-05	< 0.030	95
MEM051110-06	0.034	95
MEM051110-07	< 0.030	93
MEM051110-08	0.145	91
MEM051110-09	< 0.030	95
MEM051110-10	< 0.030	92
MEM051110-11	0.270	93
MEM051110-12	< 0.030	93
MEM051110-13	< 0.030	97
MEM051110-14	0.622	95
MEM051110-15	0.604	97
QA/QC Method Blank	< 0.004	
QC 0.100 ug Standard	0.101	
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

ANALYTICAL CHEMISTRY INC.

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FAX: 206-622-4623

CDL SAMPLING & CUSTODY FORM

Please do not write in shaded areas.

SAMPLING DATE:	May 11, 2010	REPORT TO:	Caoimhín P. Connell	ANALYSIS REQUESTED	
PROJECT Name/No:	Mt Evans	COMPANY:	Forensic Applications, Inc.	1	Methamphetamine
eMail:	Fiosrach@aol.com	ADDRESS:	185 Bounty Hunters Lane, Bailey, CO 80421	2	Use entire contents
SAMPLER NAME:	Caoimhín 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			
	MEMØ5111Ø- Ø1	X			X	X							1
	MEMØ5111Ø- Ø2	X			X	X							1
	MEMØ5111Ø- Ø3	X			X	X							1
	MEMØ5111Ø- Ø4	X			X	X							1
	MEMØ5111Ø- Ø5	X			X	X							1
	MEMØ5111Ø- Ø6	X			X	X							1
	MEMØ5111Ø- Ø7	X			X	X							1
	MEMØ5111Ø- Ø8	X			X	X							1
	MEMØ5111Ø- Ø9	X			X	X							1
	MEMØ5111Ø- 1Ø	X			X	X							1

CHAIN OF CUSTODY RECORD

Wipes Results in: ☐ µg/100cm² ☒ Total µg

Total Number of Containers (verified by laboratory): 10

PRINT NAME	Signature	COMPANY	DATE	TIME	Turnaround Time
Caoimhín P. Connell		FACTs, Inc.	5/11/10	17:20 PM	☒ 24 Hours (2X)
MIA SAZON		ACI	5/12/10	1530	☐ 2 Days (1.75X)
					☐ 3 Days (1.5X)
					☐ Routine

Custody Seals:	Yes	No
Container:	Intact	Broken
Temperature:	Ambient	Cooled
Inspected By:	MIA SAZON	
Lab File No.	10127-04	

ANALYTICAL CHEMISTRY INC.

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Website: www.acilabs.com
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FAX: 206-622-4623

CDL SAMPLING & CUSTODY FORM

Please do not write in shaded areas.

SAMPLING DATE:	May 11, 2010	REPORT TO:	Caoimhín P. Connell
PROJECT Name/No:	Mt Evans	COMPANY:	Forensic Applications, Inc.
eMail:	Fiosrach@aol.com	ADDRESS:	185 Bounty Hunters Lane, Bailey, CO 80421
SAMPLER NAME:	Caoimhín P. Connell	PHONE	303-903-7494

ANALYSIS REQUESTED

1	Methamphetamine
2	Use entire contents
3	
4	
5	
6	Not Submitted

LAB Number	Sample Number	SAMPLE MATRIX: Wipe	Vacuum	Other	ANALYSIS REQUESTS: 1	2	3	4	5	6	SAMPLER COMMENTS	LAB COMMENTS	No of Containers
	MEMØ5111Ø- 11	X			X	X							1
	MEMØ5111Ø- 12	X			X	X							1
	MEMØ5111Ø- 13	X			X	X							1
	MEMØ5111Ø- 14	X			X	X							1
	MEMØ5111Ø- 15	X			X	X							1
	~~MEMØ5111Ø- 16~~	X			X	X				X	NOT SUB		0
	~~MEMØ5111Ø- 17~~	X			X	X				X			0
	~~MEMØ5111Ø- 18~~	X			X	X				X		not received adv	0
	~~MEMØ5111Ø- 19~~	X			X	X				X			0
	~~MEMØ5111Ø- 2Ø~~	X			X	X				X			0

CHAIN OF CUSTODY RECORD

Wipes Results in: ☐ µg/100cm² ☒ Total µg

Total Number of Containers (verified by laboratory): 5

PRINT NAME	Signature	COMPANY	DATE	TIME	Turnaround Time
Caoimhín P. Connell		FACTs, Inc.	5/11/10	17:20	☒ 24 Hours (2X)
MIA SAZON	adyn	ACI	5/12/10	1530	☐ 2 Days (1.75X)
					☐ 3 Days (1.5X)
					☐ Routine

Custody Seals:	Yes	No
Container:	Intact	Broken
Temperature:	Ambient	Cooled
Inspected By:	MIA SAZON	
Lab File No.	10127-04	

FINAL SAMPLING CHECKLIST

FACTs project name:	**Mt. Evans**	**Form # ML18**
Date: May 12, 2010		
Reporting IH:	**Caoimhín P. Connell, Forensic IH**	

Functional Space #	Collected 500 cm^2	General Sampling Considerations	
	?	Floor Space Area of Lab (ft^2)	**2,236**
1	**Y**	One extra sample is required for every 500 ft^2 of floor space >1,500ft^2. Enter number of extra samples required:	**2**
2	**Y**	Enter minimum number of final samples required based on floor space.	**7**
3	**Y**	Enter Number of Functional Spaces to be included	**16**
4	**Y**	Enter the minimum number of sample required based on the number of functional spaces	**16**
5	**Y**	Is the lab a motor vehicle?	**No**
6	**Y**	Does the lab contain motor vehicles?	**No**
7	**Y**	Enter number of motor vehicles associated with the lab:	**0**
8	**Y**	Are the vehicles considered functional spaces of the lab?	**No**
9	**Y**	For vehicles that are merely functional spaces, one extra 500 cm^2 sample is required for each vehicle. Enter the number of extra samples for functional space vehicles:	**0**
10	**Y**	Enter number of large vehicles (campers, trailers, etc)	**0**
11	**Y**	One extra sample is required for every 50 ft^2 of floor space of large vehicles. Enter number of extra samples required:	**0**
12	**Y**	Enter total number of samples to be collected.	**16**
13	**Y**	One BX must be included for every 10 samples. Enter the number of BX required.	**2**
14	**Y**	Enter total number of samples/BXs required	**18**
15	**Y**	Enter total number of samples/BXs actually collected	**20**
2-1	**Y**	Collected a minimum of 5 samples from the lab?	**Yes**
		Collected a minimum of 3 discrete samples from the lab?	**Yes**
		Collected minimum of 500 cm^2 per functional space?	**Yes**
		Collected minimum of 1,000 cm^2 surface area from the lab?	**Yes**
		Sketch of the sample locations performed?	**Yes**

Appendix D

Digital Disc