



**FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.**

**Cursory Industrial Hygiene Assessment  
of an Unoccupied Property  
In the Context of Methamphetamine Contamination**

**At:**

**1753 Rosemary Street,  
Denver, Colorado**

Prepared for:  
Kathy Needham  
PO Box 826  
Jackson WY 83001

Prepared by:

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



April 3, 2008

## **EXECUTIVE SUMMARY**

On Monday, March 24, 2008 Forensic Applications Consulting Technologies, Inc. (FACTs) was contracted to perform a standard cursory evaluation for the presence of methamphetamine at 1753 Rosemary Street, Denver, Colorado (the subject property).

FACTs collected two standard composite samples for the determination of the presence of methamphetamine from ten locations in the subject property. The sampling data quality objectives (DQOs) employed by FACTs were to determine, within one tenth of the lowest possible regulatory limit, the presence of methamphetamine in the property.

The samples were collected by Mr. Caoimhín P. Connell, who is an Industrial Hygienist, as that term is defined in CRS §24-30-1402. The samples were quantitatively analyzed using GCMS.

Based on state of the art sampling and analysis techniques, both of the samples conclusively contained methamphetamine at concentrations greater than the specified detectable concentrations. Additionally, if the samples had been collected as part of the final verification process pursuant to State regulations, both samples would have demonstrated non-compliance with State regulations.

### ***Background Information***

#### **Structure**

The subject property consisted of an approximately 850 ft<sup>2</sup>, single story, single family dwelling with an unattached garage. At the time of our visit, the structure was not occupied, and was in a good state of repair.

## **ASSESSMENT PROTOCOLS**

### ***Sampling Protocol***

The assessment was performed pursuant to the intent of Colorado's Real Estate methamphetamine disclosure and testing statute as described by CRS §38-35.7-103(2)(a).

During our cursory assessment, the hypothesis was made that the subject property was devoid of cumulative methamphetamine concentrations greater than one tenth the lowest possible regulatory limit for the State of Colorado, and samples from ten locations were collected to support the hypothesis. Based on the current state regulations (which did not apply to the property during our sampling visit), the lowest allowable concentration of methamphetamine that would be permitted during a final verification sampling assessment for a five parted sample such as these would be 0.1 µg/100 cm<sup>2</sup>.



As such, the data quality objectives were not designed to quantify or characterize the *extent* or degree of contamination throughout the property, but rather to support the statement:

“Cumulative methamphetamine concentrations are not present in the property at a concentration of greater than 0.01 µg/100 cm<sup>2</sup> as determined by ten sample locations.”

Our testing produced results that failed to support the hypothesis, and we therefore accept the null hypothesis; *viz*: “Cumulative methamphetamine concentrations are present in the property at a concentration of greater than 0.01 µg/100 cm<sup>2</sup> as determined by ten sample locations.”

## **Sample Collection**

Using standard industrial hygiene methods, we collected two, 5-part composite samples from each of the two primary interior levels (basement and ground floor). The samples were submitted to Analytical Chemistry, Inc. for quantitative analysis using gas chromatography coupled with mass spectrometry. Analytical Chemistry Inc. is one of the laboratories listed in Colorado’s regulations as being proficient in methamphetamine analysis.

To ensure that extremely low detection limits used by the laboratory did not result in inappropriately classifying the property as a “meth lab” based on extremely low analytical detection limits and to meet our minimum data quality objectives, each sample area comprising the composite was approximately 58 cm<sup>2</sup> for an accumulative area of approximately 290 cm<sup>2</sup> per sample. This method results in a reportable quantity of 0.01 µg/100 cm<sup>2</sup>.

## **Wipe Samples**

The wipe sample medium was individually wrapped commercially available *Johnson & Johnson*<sup>TM</sup> 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.

The sampling media were prepared off-site in small batches in a clean environment. The sample media were inserted into individually identified polyethylene centrifuge tubes with screw caps and assigned a unique sample identifier.

## **Field Blanks**

Two field blanks were submitted with this sample suite. To protect the integrity of the blanks the sampling personnel were unaware of the identity of the blanks until the time of sampling. To maintain the integrity of the blanks, the laboratory was not informed of the identification of the blanks. Neither of the two blanks contained methamphetamine at a detectable concentration; indicating that the reported methamphetamine was exclusively from the interior of the subject property.



## Sample Results

Although the actual reported values are not part of our DQOs, in the table below, we have presented the results of the sampling in the context of the DQOs.

Sample ID	Location of Wipe	Result µg/100 cm <sup>2</sup>
RM032408-01a	Top of door bell housing	2.1
RM032408-01b	US Bathroom Light	
RM032408-01c	NW BR Door jamb	
RM032408-01d	NE BR Door jamb	
RM032408-01e	Top of kitchen cabinet in kitchen	
RM032408-01	Upstairs composite	
RM032408-02a	Laundry room Top of galvanized duct	0.6
RM032408-02b	Upstairs duct	
RM032408-02c	Porcelain lid in cubby hole	
RM032408-02d	DS Living Room light rack	
RM032408-02e	Laundry room cubby hole shelf	
RM032408-02	Downstairs composite	

**Table 1**  
**Results of Methamphetamine Samples**

## PERTINENT REGULATORY STANDARDS

The State of Colorado currently has one methamphetamine regulation and three methamphetamine statutes that are germane to this particular property.

### State Statutes

#### Environmental Statutes

Colorado has one of the country's most comprehensive and scientifically based clandestine drug laboratory regulations. The Colorado regulations become applicable when the owner of a property has received "notification" from a peace officer that chemicals, equipment, or supplies indicative of a "drug laboratory" are located at the property, ***or when a "drug laboratory" is otherwise discovered***,<sup>1</sup> and the owner of the property where the "drug laboratory" is located has received notice.

In turn, "drug laboratory" is defined in Colorado Revised Statutes §25-18.5-101 as the areas where controlled substances have been manufactured, *processed*, cooked, disposed of, *or stored* and all proximate areas that are *likely* to be contaminated as a result of such manufacturing, *processing*, cooking, disposing, or *storing*. The definitions of an illegal drug lab includes smoking methamphetamine, since smoking is a process, and its mere presence in the context of illegal possession constitutes *storage* and therefore, an "illegal drug lab" as defined by State statutes.

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<sup>1</sup> CRS §25-18.5-103



Pursuant to State statute CRS §25-18.5-105(1), an illegal drug laboratory that has not met the cleanup standards set by the State Board of Health must be deemed a public health nuisance.

### **Criminal Proceedings – Public Nuisance Statutes**

Pursuant to State statute CRS §16-13-303(c)(1), every building or part of a building including the ground upon which it is situated and all fixtures and contents thereof, and every vehicle, and any real property shall be deemed a class 1 public nuisance when used for the unlawful *storage or possession* of any controlled substance, or any other drug the possession of which is an offense under the laws of Colorado. Based on CRS §16-13-303(c)(1), the presence of extant methamphetamine in the property is *prima facie* evidence of possession of the same.

Pursuant to State statute §16-13-308(1)(a), if probable cause for the existence of a Class 1 Public Nuisance is shown to the court by means of a complaint supported by an affidavit, the court shall issue a temporary restraining order to abate and prevent the continuance or recurrence of the nuisance or to secure property subject to forfeiture. Such temporary restraining order shall direct the County Sheriff or a peace officer to seize and, where applicable, close the public nuisance and keep the same effectually closed against its use for any purpose until further order of the court.

An alternative declaration of Public Nuisance may be found in statute §16-13-307(4), wherein an action to abate a public nuisance may be brought by the district attorney, or the attorney general with the consent of the district attorney, in the name of the people of the State of Colorado or in the name of any officer, agency, county, or municipality whose duties or functions include or relate to the subject matter of the action.

### **State Regulations**

Pursuant to Colorado regulations 6 CCR 1014-3,<sup>2</sup> following discovery and notification, a comprehensive and detailed “Preliminary Assessment” must be commissioned by the property owner and performed by an authorized and properly trained Industrial Hygienist who must characterize extant contamination. The content and context of the “Preliminary Assessment” is explicitly delineated by regulation. Any remediation or cleaning of the property must be based on the Industrial Hygienist’s Preliminary Assessment, and cannot occur until such assessment has been conducted.

### **Mandatory Contamination Thresholds**

The actual methamphetamine concentrations found in each sample taken at the subject property, for reasons described below, are not germane, are not within our stated data quality objectives, and therefore, are not required to be reported here. However, since the results are so high, we have reported the concentrations for this project only.

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<sup>2</sup> Titled: Colorado Department Of Public Health And Environment, State Board Of Health, *Regulations Pertaining to the Cleanup of Methamphetamine Laboratories*.



A recurring myth in methlab related issues is that if an Industrial Hygienist performs a cursory investigation (such as that performed at the subject property) or a “Preliminary Assessment” and finds methamphetamine, but the concentration is less than 0.5 micrograms per one hundred square centimeters ( $\mu\text{g}/100\text{cm}^2$ ) of surface area, then the property is “OK,” and not covered by the State regulations.

However, this argument is erroneous and no such provisions are found anywhere in State statutes or State regulation. A strict interpretation of regulation is if an Industrial Hygienist chooses non-mandatory sampling (such as performed at the subject property) during a cursory industrial hygiene evaluation, and those samples result in ANY contamination, even below the value of  $0.5 \mu\text{g}/100\text{cm}^2$ , then the property must, by state regulation, be declared a methlab.<sup>3</sup> This is due to the fact that cursory sampling does not meet the data quality objectives upon which the State clean-up level of “ $0.5 \mu\text{g}/100\text{cm}^2$ ” value is based.

In any event, contrary to erroneous public belief, the mere value of “ $0.5 \mu\text{g}/100\text{cm}^2$ ” is not the State of Colorado cleanup level, but rather that value is the basis upon which the final cleanup level is established and which is described in the mandatory Appendix A of the State regulations. The Colorado clearance level of “ $0.5 \mu\text{g}/100\text{cm}^2$ ,” frequently misquoted by members of the general public, applies exclusively as *prima facie* evidence of decontamination at the end of a project<sup>4</sup> and is that attainment threshold occasionally needed to issue a “decision statement” (final clearance).

Contrary to popular misconception, there is no *de minimis* concentration during a Preliminary Assessment below which a property could be declared “not a meth lab” or “not of regulatory concern” since virtually any concentration of meth present in a sample at the property 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.*<sup>5</sup>

## CONCLUSIONS

Based on state of the art sampling and analysis techniques, we conclusively determined the presence of methamphetamine in the subject property; and based on current statutes and regulations, the property meets the definition of an “illegal drug lab” as described below.

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<sup>3</sup> *Ibid.* Appendix A

<sup>4</sup> Colorado Department Of Public Health And Environment, State Board Of Health, *Regulations Pertaining to the Cleanup of Methamphetamine Laboratories*, 6 CCR 1014-3.

<sup>5</sup> *Ibid.*



According to current State of Colorado Regulations and Statutes, this discussion serves as “Discovery” as that term is found in Colorado Revised Statutes §25-18.5-103 and, upon delivery of this document to the property owner, serves as “Notification” as that term is used in CRS §25-18.5-103 (1)(a).

As such, this document also serves as the identification of probable contamination and, therefore, the conclusive presence of an “illegal drug lab” as defined by State statute (CRS §25-18.5-101). Based on this finding, after notification, **entry into the property is prohibited by statute CRS §25-18.5-104**. (From this point forward entry into the property is prohibited by all personnel including the owner, occupant, owner’s agent, property manager, and maintenance personnel unless they meet the training requirements pursuant to State statutes and state regulations.)

Pursuant to State statutes, and State regulations, the property must now be subject to an assessment known as a “Preliminary Assessment” whose elements are defined by State Regulations.

Our qualitative interpretation of the data suggests that the contamination is sufficiently elevated that the Preliminary Assessment will probably require some limited remediation activities in the basement.

## **RECOMMENDATIONS**

At the request of the client, a copy of this letter has been forwarded to the Governing Body (City and County of Denver Environmental protection Division).

The contact for the Governing Body is:

Mr. Gene Hook  
Environmental Protection Specialist  
201 W. Colfax Ave. Depart. 1009  
Denver 80202  
Phone: 720-865-5534  
Email: gene.hook@ci.denver.co.us

Sincerely,



Caoimhín P. Connell  
Forensic Industrial Hygienist



# APPENDIX A LABORATORY REPORT







# ANALYTICAL CHEMISTRY INC.

Established in 1979

4611 S. 134th Place, Ste 200  
Tukwila WA 98168-3240  
Phone: 206-622-8353  
Fax: 206-622-4623

E-mail: aci@acilabs.com

Website: www.acilabs.com

<b>Lab Reference:</b>	08117-09
<b>Date Received:</b>	March 28, 2008
<b>Date Completed:</b>	April 1, 2008

April 1, 2008

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

**CLIENT REF:** Rosemary

**SAMPLES:** wipes/2

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

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

<b>Sample</b>	<b>Methamphetamine, ug</b>	<b>% Surrogate Recovery</b>
RM032408 - 01	6.32	105
RM032408 - 02	1.63	97
QA/QC Method Blank	< 0.004	
QC 0.100 ug Standard	0.100	
QA 0.020 ug Matrix Spike	0.017	
QA 0.020 ug Matrix Spike Duplicate	0.019	
Method Detection Limit (MDL)	0.004	
Practical Quantitation Limit (PQL)	0.030	

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

Robert M. Orheim  
Director of Laboratories





# APPENDIX B CONSULTANT'S SOQ





## FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.

### CONSULTANT STATEMENT OF QUALIFICATIONS

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

<b>FACTs project name:</b>	<b>Rosemary</b>	<b>Form # ML15</b>
<b>Date:</b>	<b>April 3, 2008</b>	
<b>Reporting IH:</b>	<b>Caoimhín P. Connell, Forensic IH</b>	

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

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

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

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

Mr. Connell is also a current law enforcement officer in the State of Colorado, who has conducted clandestine laboratory investigations and performed risk, contamination, hazard and exposure assessments from both the law enforcement (criminal) perspective, and from the civil perspective in residences, apartments, motor vehicles, and condominiums. Mr. Connell has conducted over 70 assessments in illegal drug labs.

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

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