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

At:

131 South Benton Street
Denver, Colorado

Prepared for:

[redacted]

Prepared by:

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

February 15, 2008

EXECUTIVE SUMMARY

On Wednesday, Thursday February 7, 2008 Forensic Applications Consulting Technologies, Inc. (FACTs) was contracted to perform a standard cursory evaluation for the presence of methamphetamine at 131 S. Benton Street, 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 half 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, we conclusively determined the presence of methamphetamine in the residential structure at a concentration of three times greater than would be permitted by State regulations if the sampling had been performed as part of a final clearance sampling project.

Background Information

Structure

The subject property consisted of a two story, single family dwelling with a full basement. At the time of our visit, the structure was unoccupied, was emptied of all personal chattels, and was in a generally 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 methamphetamine at concentrations greater than one half of the lowest possible regulatory limit for the State of Colorado, and data would be collected to support the hypothesis. Based on the current state regulations (which did not apply to the property at the time of our assessment), the lowest allowable concentration of methamphetamine that would be permitted during a final verification sampling assessment for a five parted sample would be 0.1 µg/100 cm2. Therefore, we adjusted our detection limits such that the laboratory would not report detectable values of methamphetamine until the concentration exceed the equivalent of 0.05 µg/100 cm2. 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:

"Methamphetamine is not present in the property at a concentration of greater than 0.05 µg/100 cm2."

Our testing produced results that failed to support the hypothesis, and we therefore accept the null hypothesis; *viz.* the area conclusively contains methamphetamine. Although the degree and extend of contamination throughout the property remains unknown, our sampling did confirm that the concentrations of methamphetamine in the basement were sufficiently elevated that the results indicated that the methamphetamine concentrations would have been approximately three times greater than permitted by State regulations, if the sampling had been conducted pursuant to final clearance sampling.

Sample Collection

Using standard industrial hygiene methods, we collected two, 5-part composite samples from each of the 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 reduce our sampling error, each sample area comprising the composite was approximately 500 cm2. 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, we instructed the laboratory to extract a 2.5 ml aliquot from a 100 ml final solution and report total micrograms in the aliquot. This modification would effectively result in a reportable quantity of 0.05 µg/100 cm2.

Wipe Samples

The wipe sample medium was individually wrapped commercially available *Johnson & Johnson*™ gauze pads. Each gauze material was assigned a lot number for quality assurance and quality control (QA/QC) purposes and recorded on a log of results. Each pad was moistened with reagent grade methyl alcohol. Each batch of alcohol was assigned a lot number for QA/QC purposes and recorded on a log of results.

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

A field blank was submitted along with the sample suite. The field blank indicated that the sampling material was devoid of methamphetamine at concentrations greater than the detection limit of the method.

Sample Results

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 cm2
BM020708-01a	US Livingroom NE Corner	<0.05
BM020708-01b	US SW Bedroom SW Corner	
BM020708-01c	US SE Bedroom SE Corner	
BM020708-01d	US Kitchen NW Corner	
BM020708-01e	US TV Room NW Corner	
BM020708-01	Upstairs Composite	
BM020708-02a	DS Furnace Room top of light fixture	0.28
BM020708-02b	DS Rec Room Shelf from Bar	
BM020708-02c	DS NW Utility Room top of shelf in closet	
BM020708-02d	DS Bathroom Top of light fixture	
BM020708-02e	DS Family Room S Wall paneling	
BM020708-02	Downstairs Composite	
BM020708-03	Field Blank	<0.05

Table 1
Results of Methamphetamine Samples

Based on our data quality objectives, a sample would have been considered positive if the methamphetamine concentration was greater than or equal to 0.05 µg/100 cm2. In this case, the Downstairs composite was six times greater than our decision threshold and therefore, three times greater than the equivalent state permitted level for similar sampling. A copy of the laboratory report is included with this discussion as Appendix A.

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***,[1] and the owner of the property where the "drug laboratory" is located has received notice.

[1] CRS §25-18.5-103

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.

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.

Property Statutes

Pursuant to CRS §38-35.7-103 (1) a buyer of residential real property has the right to test the property for the purpose of determining whether the property has ever been used as a methamphetamine laboratory.

The fatal flaws of CRS §38-35.7-103, notwithstanding, pursuant to CRS §38-35.7-103 (2)(a):

> If the buyer's test results indicate that the property has been used as a methamphetamine laboratory but has not been remediated to meet the standards established by rules of the state board of health…, the buyer shall promptly give written notice to the seller of the results of the test, and the buyer may terminate the contract.

The pertinent State *regulations* (discussed below) are unequivocal and state:

> 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.

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, [2] 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

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 (µg/100cm2) 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 µg/100cm2, then the property must, by state regulation, be declared a methlab.[3] 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 µg/100cm2" value is based.

In any event, contrary to erroneous public belief, the mere value of "0.5 µg/100cm2" 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 µg/100cm2," frequently misquoted by members of the general public, applies exclusively as *prima facie* evidence

[2] Titled: Colorado Department Of Public Health And Environment, State Board Of Health, *Regulations Pertaining to the Cleanup of Methamphetamine Laboratories*.
[3] *Ibid*. Appendix A

of decontamination at the end of a project[4] 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.*[5]

In a recent opinion issued by the State of Colorado Department of Public Health and the Environment, the state opined that even when the cursory concentrations are far below state mandated limits:

"Performing a PA [Preliminary Assessment] *and clearance sampling is the only way to meet the requirements of the Reg, get the liability shield, and provide protection for future Real Estate transactions."*

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.

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 seller and the seller's representatives unless they meet the training requirements pursuant to State statutes and state regulations.)

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

[5] *Ibid*.

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.

Based on our visual inspection the property, the property contains several inconclusive visual indicators of methamphetamine production.

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

This letter must be provided to the seller in a timely fashion. We recommend that a copy of the letter be forwarded to the City and County of Denver Division of Environmental Health.

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

Lab Reference:	08108-05
Date Received:	February 13, 2008
Date Completed:	February 15, 2008

February 15, 2008

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

CLIENT REF: Benton

SAMPLES: wipes/3

ANALYSIS: The samples were extracted with 100 milliliters (ml) of buffer. A sample aliquot of 2.5 ml was analyzed with the internal standard for methamphetamine by Gas Chromatography-Mass Spectrometry.

RESULTS: in total micrograms (ug)

Sample	***Methamphetamine, ug***	***% Surrogate Recovery***
BM020708 - 01	< 0.030	98
BM020708 - 02	0.177	100
BM020708 - 03	< 0.030	96
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	0.022	
Method Detection Limit (MDL)	0.004	
Practical Quantitation Limit (PQL)	0.030	

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

Robert M. Orheim
Director of Laboratories

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)

FACTs project name:	**Benton Street**	**Form # ML15**
Date: February 15, 2008		
Reporting IH:	**Caoimhín P. Connell, Forensic IH**	

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

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

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

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

Mr. Connell is also a 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 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.