



FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.

**Industrial Hygiene Assessment
of an Unoccupied Property
Resulting in the Discovery of an
Illegal Drug Laboratory
at
1580 South Harlan Street,
Denver, Colorado**

Prepared for:



Prepared by:

FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.

185 Bounty Hunter's Lane
Bailey, CO 80421



January 16, 2008

EXECUTIVE SUMMARY

On Saturday, January 12, 2008 Forensic Applications Consulting Technologies, Inc. (FACTs) was contracted to perform a standard cursory evaluation for the presence of methamphetamine at 1580 South Harlan Street, Denver, Colorado.

We 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 normal analytical confidences,¹ the possibility of methamphetamine *presence* at the subject 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; 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) and CRS §38-35.7-103(2)(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. (The prohibition of entry extends to the owner, the owners representatives, prospective buys, home inspectors, and anyone else “...unless the person is trained or certified to handle contaminated property pursuant to board rules or federal law.”)

Background Information

Structure

The subject property consisted of a single family dwelling with a full basement. At the time of our visit, the structure was unoccupied, and was in a generally poor state of repair.

¹ Colorado Department Of Public Health And Environment, State Board Of Health, Regulations Pertaining to the Cleanup of Methamphetamine Laboratories, 6 CCR 1014-3, used merely as a sampling reference.



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 the detection limit for the method, and data would be collected to support the hypothesis. As such, the data quality objectives were not designed to quantify or characterize the *extent* or degree of contamination, but rather to support the statement: "Methamphetamine is not present in the property."

Our testing produced results that failed to support the hypothesis, and we therefore accept the null hypothesis; *viz.* the area conclusively contains methamphetamine. The degree and extend of contamination throughout the property remains unknown.

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.

Wipe Samples

The wipe sample medium was individually wrapped commercially available *Johnson & Johnson*TM 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

Our data quality objectives did not include a field blank, and none were submitted. The history of the FACTs sampling media has demonstrated a media and solvent contamination level below the analytical detection limit for the method (for n=48 for the combined gauze and MeOH).

Field Duplicates

For the purposes of the data quality objectives associated with this cursory evaluation, no duplicates were required, and none were collected.



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
LM011208 -01a	Top of light fixture in kitchen	POSITIVE
LM011208 -01b	Top of cabinets in laundry room	
LM011208 -01c	W central bedroom ceiling	
LM011208 -01d	NE Bedroom ceiling fan	
LM011208 -01e	NW Bedroom closet	
LM011208 -01	Upstairs composite	
LM011208 -02a	Basement- Laundry room shelf	POSITIVE
LM011208 -02b	Basement- Top of shelf in SE Bedroom	
LM011208 -02c	Basement- Top of shelf in larder	
LM011208 -02d	Basement- Top of shelf behind the bar	
LM011208 -02e	Basement- Wall NE Corner, in Recreation room	
LM011208 -02	Basement- composite	

Table 1
Results of Methamphetamine Samples

Both of the submitted composites contained methamphetamine. 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*,² 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

² CRS §25-18.5-103



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.

In this case, the conclusive presence of methamphetamine is a reasonable indicator that the property was used to manufacture methamphetamine. In any event, the manufacturing of methamphetamine, *per se*, is a moot point as described below.

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 1014-3,³ 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.

Since discovery and notification had not, to our knowledge, taken place at the time of our visit, FACTs was not performing a “Preliminary Assessment” as that term is defined in State regulation, and this work does not meet the definition of a “Preliminary Assessment” and cannot be used or otherwise substituted for a Preliminary Assessment.

Furthermore, no retesting of the property can challenge these data and provide regulatory relief unless the retesting is performed as part of the Preliminary Assessment, and a Decision Statement is subsequently issued pursuant to state regulations.

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.

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. If an Industrial Hygienist chooses non-mandatory sampling (such as performed at the subject property) during an 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.⁴ 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

³ Titled: Colorado Department Of Public Health And Environment, State Board Of Health, *Regulations Pertaining to the Cleanup of Methamphetamine Laboratories.*

⁴ *Ibid.* Appendix A



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 of decontamination at the end of a project⁵ 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.*⁶

Although our initial testing was conducted pursuant to CRS §38-35.7-103, based on our observations, our role and activities jointly and contemporaneously fell under CRS §25-18.5-103, and the drug laboratory was “otherwise” discovered.

CONCLUSIONS

Based on our visual inspection the property contained several inconclusive visual indicators of methamphetamine production and use.

Based on our objective quantitative sample results collected during our visit, the subject property contains methamphetamine. Our qualitative interpretation of the data suggests that the contamination may be sufficiently low to permit a Decision Statement directly from the Preliminary Assessment (if the Preliminary Assessment is conducted in a manner consistent with final verification sampling).

Based on the presence of methamphetamine, and other methamphetamine production indicators, the property meets the definition of an illegal drug lab and Class 1 public nuisance as defined in State statutes.

Pursuant to State statutes, the illegal drug lab has been “otherwise discovered.”

This discussion serves as “notification” as that term is defined by State statute.

⁵ Colorado Department Of Public Health And Environment, State Board Of Health, *Regulations Pertaining to the Cleanup of Methamphetamine Laboratories*, 6 CCR 1014-3.

⁶ *Ibid.*



Pursuant to statute, a Preliminary Assessment must be performed pursuant to regulation by an authorized Industrial Hygienist, and a “decision statement” obtained, or the property must be demolished.

By virtue of these findings, any second test performed pursuant to CRS §38-35.7-103(2)(b) that fails to confirm the presence of methamphetamine can not be used to release the property owner from the need to perform the required Preliminary Assessment, since the discovery and notification have already occurred pursuant to CRS §25-18.5-103 (1)(a) and Colorado regulations 6 CCR 1014-3.

RECOMMENDATIONS

We recommend that the State statutes and State regulations be followed diligently.

Based on the above information, a “Preliminary Assessment” must be performed regardless of the findings of any subsequent testing, or the property must be demolished.

Pursuant to CRS §38-35.7-103(2)(a), the buyer must promptly give written notice to the seller of the results of the test, and the buyer may terminate the contract. We recommend that the registered owner (the seller) be notified in writing, by certified mail, of the results of the methamphetamine tests performed at the property.

Failure to take action in a manner consistent with state statutes may result in actions by the City and County of Denver Department of Environmental Health (the County of Jurisdiction).

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:	08102-01
Date Received:	January 14, 2008
Date Completed:	January 15, 2008

January 15, 2008

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

CLIENT REF: Harlan

SAMPLES: wipes/2

ANALYSIS: Methamphetamine by Gas Chromatography-Mass Spectrometry.

RESULTS: in total micrograms (ug)

Sample	Methamphetamine, ug	% Surrogate Recovery
LM011208 - 01	0.475	101
LM011208 - 02	0.314	106
QA/QC Method Blank	< 0.004	
QC 0.100 ug Standard	0.100	
QA 0.020 ug Matrix Spike	0.020	
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

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:	Harlan	Form # ML15
Date:	Jan 12, 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 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.