

FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.

Final Verification Sampling and DECISION STATEMENT of an Identified Illegal Drug Laboratory At:

19042 E 53rd Avenue Denver, Colorado

Prepared for:
Metro Brokers (Gollas and Company, Inc.)
3401 Quebec Street, #9300
Denver, Colorado 80207

Prepared by:

FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.

185 Bounty Hunter's Lane Bailey, CO 80421



March 7, 2009

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EXECUTIVE SUMMARY

On or about August 18, 2005, the United Stated Drug Enforcement Agency conducted a raid and executed a search warrant at 19042 E 53rd Ave., Denver, Colorado (the subject property). During that action, materials used in the manufacturing of methylenedioxymethamphetamine (MDMA) were discovered in the residence. Pursuant to State regulations, MDMA is covered under the definition of "methamphetamine," and for the purposes of regulation, is indistinguishable from methamphetamine.

On August 18, 2005 the City and County of Denver, Department of Environmental Health, Environmental Protection Division placarded the structure prohibiting entry.

Following the discovery, three separate industrial hygiene consultants entered the property and performed non-mandatory sampling. The reports from two of the consultants were available for our review. Neither of the work products met the regulatory elements of a "Preliminary Assessment;" (both were fatally flawed and /or incomplete and neither could be used as a Preliminary Assessment). FACTs was informed that a third consultant also performed some kind of unspecified work at the property.

Illegal cleaning activities took place by unknown parties at the property between the dates of the discovery and the date of the Preliminary Assessment.

Monday, December 1, 2008, Mr. Caoimhín P. Connell, Forensic Industrial Hygienist, entered the property and performed the visual inspection site work and issued a Preliminary Assessment on December 10, 2009.

Between December 10, 2008 and February 5, 2009 authorized remediation activities were conducted by Bio-clean of Colorado.

On February 5, 2009 FACTs entered the property to perform an inspection and final verification sampling. The results of the sampling indicated that with the exception of the upstairs master bathroom, the concentration of MDMA was below regulatory limits. (It is not an unusual occurrence for a final inspection to fail and only about 50% of properties will pass on the first inspection). On February 17, 2009, FACTs issued a letter to the property manager detailing the necessary steps to ensure compliance and correct the deficiencies.

On February 25, 2009, Bio-Clean of Colorado performed the necessary corrective actions pursuant to the requirements outlined in the Feb. 17, 2009 letter; and, on the same day, FACTs performed an inspection of the pre-work containment, and the area following decontamination. Also on that day, FACTs collected the necessary final verification samples.

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



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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 issues 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

Federal Requirements

All work performed by FACTs was consistent with OSHA regulations. The Remediation Contractor was responsible for ensuring its own compliance with OSHA. FACTs has no firsthand knowledge of the Remediator's actions or procedures while on site. However, FACTs is not aware of any violations of OSHA regulations during this project.

State Requirements

The Colorado State Board Of Health *Regulations Pertaining to the Cleanup of Methamphetamine Laboratories* (6-CCR 1014-3) become applicable when an 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 and the owner of the property where the drug laboratory is located has received notice. Whenever a methlab has been so discovered, the property must be either demolished or documented as containing contaminant levels below statutory thresholds.¹

State statutes CRS §25-18.5-103 (1)(b) states:

An owner of any personal property within a structure or vehicle contaminated by illegal drug laboratory activity shall have ten days after the date of discovery of the laboratory or contamination to remove or clean his or her personal property according to board rules. If the personal property owner fails to remove the personal property within ten days, the owner of the structure or vehicle may dispose of the personal property during the cleanup process without liability to the owner of the personal property for such disposition.

State statutes CRS §25-18.5-103 (3) states:

A person who removes personal property or debris from a drug laboratory shall secure the property and debris to prevent theft or exposing another person to any toxic or hazardous chemicals until the property and debris is appropriately disposed of or cleaned according to board rules.

¹ The actual contaminant thresholds will vary based on the type of activities identified at the lab; the actual statutory threshold is incumbent on the number of samples collected as a composite or discrete samples.



Decision Statement for

19042 E 53 Ave, Denver, Colorado

During this project, personal belongings were removed by parties unknown and taken to locations unknown, using transportation unknown. The locations and the vehicles used in transportation are now considered contaminated.

After a property has been remediated, an Industrial Hygienist must test the hypothesis that the property is <u>not</u> 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, ² that area shall be deemed to be compliant with CRS §25-18.5-103 (2) and the Industrial Hygienist shall release the property.³

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 the mandatory information as summarized in Table 1, below.

³ 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.



² No guarantee is ever made or implied that the property is completely free of contamination. Rather, a reasonable, standardized approach to decontamination is executed.

Mandatory		
Final Documents	DOCUMENTATION	Included
6-CCR1014-3		
§8.1	Property description field form	Note 1
§8.2	Description of manufacturing methods and chemicals	Note 1
§8.3	Law Enforcement documentation review discussion	Note 1
§8.4	Description and Drawing of Storage area(s)	Note 1
§8.5	Description and Drawing of Waste area(s)	Note 1
§8.6	Description and Drawing of Cook area(s)	Note 1
§8.7	Field Observations field form	Note 1
30.1	FACTs Functional space inventory field form	Note 1
§8.8	Plumbing inspection field form	Note 1
_	FACTs ISDS field form	Note 1
§8.9	Contamination migration field form	Note 1
§8.10	Identification of common ventilation systems	Note 1
§8.11	Description of the sampling procedures and QA/QC	Note 1
§8.12	Analytical Description and Laboratory QA/QC	Can
§8.13	Location and results of initial sampling with figure	Cando
§8.14	FACTs health and safety procedures in accordance with OSHA	Can
§8.15	Contractor's description of decontamination procedures and each	Note 2
30.10	area that was decontaminated	Note 2
§8.16	Contractor's description of removal procedures each area where	Note 2
CO 47	removal was conducted, and the materials removed	Note 2
§8.17	Contractor's description of encapsulation areas and materials	Note 2
§8.18	Contractor's description of waste management procedures	
§8.19	Drawing, location and results of final verification samples	Carl
§8.20	FACTs Pre-remediation photographs and log	Note 1
	FACTs Post-remediation photographs and log	Note 2
§8.21	FACTs SOQ	Cando
§8.22	Certification of procedures, results, and variations	Can
§8.23	Mandatory Certification Language	Canto
§8.24	Signature Sheet	Canto
	Analytical Laboratory Reports	Can
NA	FACTs final closeout inventory document	Cant
INA	Available Law Enforcement documents	Note 1
	FACTs Field Sampling Forms	Cant

Note 1: See the Preliminary Assessment dated December 10, 2008 (included with this Decision Statement on the DVD) and filed with the Governing Body.

Note 2: See attached DVD

Table 1 **Inventory of Mandatory Final Information**



VERIFICATION SAMPLING

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.

Wipe Samples

The wipe sample medium was individually wrapped commercially available Johnson & JohnsonTM gauze pads (FACTs Lot# G0901). Each pad was moistened with reagent grade methyl alcohol (FACTs Lot# A0801). 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 location of the samples was based on professional judgment. In this case, it was FACTs' professional opinion that authoritative random sampling within each functional space would be 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 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 a suitable surface, the sample would be collected. Surfaces with an intrinsic low probability of contamination were excluded from consideration (e.g. windows, water basin or water catchment areas, faucets, etc.) Each sample area was then delineated with a measured outline and sampled.

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 to Analytical Chemistry, Inc. (ACI) of Tukwila, Washington. ACI is one of the laboratories identified in State regulation 6-CCR 1014-3 as being proficient in performing MDMA analysis.

Lead and Mercury

Based on the best information available, active manufacturing took place on the property via a safrole/ P-2-P method. One version of the method involves the use of mercuric chloride, and indeed, this compound was identified at the property by Law Enforcement officers.

Pursuant to State regulations,

7.3. If the preliminary assessment indicates the phenyl-2-propanone (P2P) method of methamphetamine manufacturing was used, surface wipe samples for lead shall not exceed a concentration of 40 μ g /ft2, and vapor samples for mercury shall not exceed a concentration of 1.0 μ g /m3.

Furthermore, the regulations require final verification sampling to be based on the Preliminary Assessment.

For this property, objective sampling data existed from previous consultants who had performed sampling in the structure. Specifically, on or about April 6, 2007, AG Wassenaar Inc. (AGW) had performed lead wipe sampling and mercury wipe sampling for the property. The sample results of the AGW samples are included as an Appendix in this Decision Statement. The objective sample results, were included as an integral part of the Preliminary Assessment, and were used in the decision making process to issue the Decision Statement.

Lead

Although the initial work by performed by AGW did not rise to the level of a Preliminary Assessment, FACTs nevertheless has confidence in the lead wipe samples AGW had collected.

The wipe samples indicated that lead was not a reasonably anticipated contaminant in the structure. Each of the samples, except one, indicated that the lead was not present at detectable levels. AGW had two *de facto* reportable quantities: 3.7 µg/ft2 and 18.5 µg/ft2. One composite sample, collected from the ventilation system, indicated a concentration greater than the decision level for lead.⁴ However, the sample was collected from the surfaces of galvanized metal. The zinc used in hot dipped galvanic protection typically has a lead content of about 0.5%. Therefore, one would normally anticipate elevated lead concentrations on this kind of surface. In light of the otherwise non-detects associated with the sampling, it is reasonable to interpret the single elevated lead concentration as normal background for the surface under consideration. According to State Regulations:

⁴ Although available documents did not specify the area represented by the wipe, AGW indicated that their result was greater than the "Limit." This could only be the case if AGW collected a five parted sample, which would result in a decision threshold of 8.0 μg/ft2.

7.0 Cleanup Levels.

The following cleanup levels shall be used to determine if a property has been adequately decontaminated. They may also be used during the preliminary assessment to demonstrate that a property, or portion of a property, is not contaminated. All properties must meet the cleanup level for methamphetamine. Additional cleanup levels that may be applied to a property shall be based on information gained during the preliminary assessment.

Therefore, FACTs incorporated the lead wipes as part of the Preliminary Assessment, and interpreted the wipe sample results to indicate that lead was not a reasonable expected contaminant at the property, as permitted by regulation.

Mercury

Similarly, AGW performed surface wipe sampling for mercury. The final clearance testing for mercury is based on the mass of mercury in the air per unit cubic meter.

In indoor modeling, experimentation has shown that contaminant concentrations in the air are in dynamic equilibrium with source emission versus exfiltration rates. The predicted decay in contaminant concentration following release inside a building can be described by a standard⁵ air modeling algorithm:

$$C_t = C_o \times e^{-\left(\frac{kQ}{V}\right)t}$$

Wherein:

 C_t is the dynamic concentration (C) at any time (t);

 C_o is the original (baseline) concentration;

k is the mixing factor;

Q is the amount of outside air being brought into the building; and

V is the volume of the study area

The concentration of the contaminant in the indoor space at any time (C_t) can thus be estimated by:

$$C_{t} = C_{o} \times e^{-\left(\frac{kQ}{V}\right)t} + \left(\frac{S}{kQ} + C_{a}\right) \times \left(1 - e^{-\left(\frac{kQ}{V}\right)t}\right)$$

⁶ Wadden, R.A.; Scheff, P.A., *Indoor Air Pollution: Characterization, Prediction, and Control* Wiley-Interscience Publications, 1983



⁵ Wadden, R.A.; Scheff, P.A., *Indoor Air Pollution: Characterization, Prediction, and Control* Wiley-Interscience Publications. 1983

Wherein:

 C_t is the dynamic concentration (C) at any time (t);

 C_o is the original (baseline) concentration;

k is the mixing factor;

Q is the amount of outside air being brought into the building;

V is the volume of the study area;

S represents the source(s) of contaminants;

 C_a is the concentration of CO2 in the outside air.

The model is essentially a single-compartment, dynamic equilibrium model which considers "sinks" (places where the contaminant is lost from the structure) and "sources" (places within and without the structure from whence the contaminant is coming).

"Sinks" are factors which will significantly reduce the concentration of the contaminant of concern and "sources" are the factors that will increase the concentration of the contaminant of concern.

Based on known fugitive emission properties, in the case of 19042 E 53rd Avenue, objective sampling demonstrated that although mercury was identified in law enforcement documents, there was no objective source in the structure following discovery and removal of the gross materials and equipment.

Objective sampling by AGW demonstrated that mercury in the structure, where sampled, was not present at a concentration exceeding $0.0002~\mu g/cm2$, and for two samples, the concentration was less than $0.00004~\mu g/cm2$. At these non detectable levels, it would be impossible for the airborne concentration to exceed the regulatory limit of $1~\mu g/m2$. Furthermore, considering the length of time that had passed from discovery to final verification sampling, even if "hidden" mercury was present, the hidden source would have been long ago depleted as mercury was lost from the structure via the airborne route.

Having said all this, the above is based on the worst case scenario of elemental mercury being present; elemental mercury has a vapor pressure of 0.001 mm Hg at 20°C. For this structure, however, law enforcement documents indicate that mercuric chloride was recovered from the property, and not elemental mercury (although some verbal anecdotal statements were found that elemental mercury *may* have been present and not documented). The vapor pressure of mercuric chloride at 20°C is negligible.

Therefore, based on the objective data available to FACTs at the time of the Preliminary Assessment, and as incorporated into this Decision Statement, mercury was ruled out as a potential contaminant at the property, as permitted by regulation.

Sample Results

In the Table below, we have presented the results of the final verification sampling.

Sample Number	Location	Area (cm2)	Result µg/100cm2	Decision Threshold	Decision Status
53E020509-1	Living room/Dining room S wall at ceiling	523	0.00	0.50	PASS
53E020509-2	Back wall of pantry closet	523	0.00	0.50	PASS
53E020509-3	Powder bathroom E wall alongside mirror	523	0.01	0.50	PASS
53E020509-4	Laundry room at water control panel	542	0.01	0.50	PASS
53E020509-5	Garage inside hot water door	523	0.01	0.50	PASS
53E020509-6	Stair/Study/Closet tops of door jambs	565	0.01	0.50	PASS
53E020509-7	SW Bedroom ceiling at entrance	523	0.00	0.50	PASS
53E020509-8	Field Blank	NA	0.02	0.50	PASS
53E020509-9	US Bathroom Plastic tile around tub	542	0.01	0.50	PASS
53E020509-10	Field Blank	NA	0.02	0.50	PASS
53E020509-11	NW Bedroom ceiling at north end	523	0.00	0.50	PASS
53E020509-12	Master bedroom lower west wall	523	0.01	0.50	PASS
53E020509-13	Master Bath top of shower rail	523	1.05	0.50	FAIL
53E020509-14	Master closet top of west wall south end	523	0.00	0.50	PASS
53E020509-15	Vent interior	523	0.27	0.50	PASS
	Follow up Sampling Vi	sit, Febr	uary 25, 2009		
53E022509-1	East wall in master bath by light switch	523	0.00	0.50	PASS
53E022509-2	Master closet lower north wall	523	0.00	0.50	PASS

^{*}Expressed as absolute micrograms

Table 2 Summary of Final Sample Results

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 batch, and randomly inserted in the sampling sequence and submitted along with the samples for MDMA analysis. To ensure the integrity of the blanks, FACTs personnel were unaware, until the actual time of sampling, which specific samples would be submitted as blanks. To ensure the integrity of the blanks, laboratory personnel were not informed which specific sample(s) may have been blank.



The symbol "<" indicates that the concentration was "less than" the reported value.

Field Duplicates

For the purposes of the data quality objectives associated with this final verification sampling, duplicates were not required.

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 donned a fresh disposable Tyvek suit. The ladder brought into the structure had been cleaned at a car wash prior to entry.

Sample Locations

The drawing below identifies the location of each verification sample.

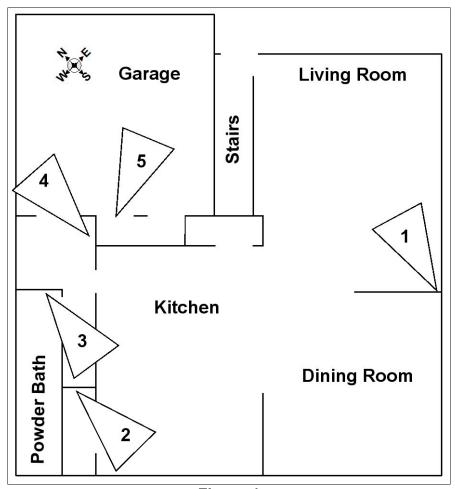


Figure 1
Locations of Final Verification Samples
First Floor - Not To Scale

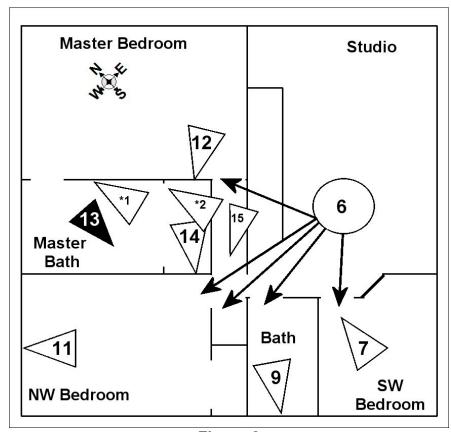


Figure 2
Locations of Final Verification Samples
Second Floor - Not To Scale

In the above drawings, the blackened sample location indicates the non-compliant sample, and the samples designated with an asterisk (*) are the follow-up (compliant) samples.

Quality Assurance / Quality Control

February 5, 2009 Data Set

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. The QA/QC indicate the data meet the stated data quality objectives. MDL was 0.004 μ g; LOQ was 0.03 μ g; MBX <MDL; LCS 1 μ g (RPD 3%, recovery =97%); Matrix spike 1 μ g (RPD 4%; recovery 96%); Surrogate recovery (all samples): High 105% (Sample 5 and 14), Low 80% (Sample 15); FACTs reagents: MeOH lot #A0801 <MDL for n=8; Gauze lot #G0901 <MDL for n=6. Sample 15 had a surrogate recovery that was flagged. FACTs performed a recovery correction, correcting to 100% recovery, and estimated the total mass recovered to be 1.75 μ g; which would have resulted in a concentration of 0.33 μ g/100cm2.

February 25, 2009 Data Set

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. The QA/QC indicate the data meet the stated data quality objectives. MDL was 0.004 μ g; LOQ was 0.03 μ g; MBX <MDL; LCS 1 μ g (RPD 2%, recovery =102%); Matrix spike 1 μ g (RPD 3%; recovery 97%); Surrogate recovery (all samples): High 93% (Sample 2), Low 90% (Sample 1); FACTs reagents: MeOH lot #A0801 <MDL for n=8; Gauze lot #G0901 <MDL for n=6.

The QA/QC indicate the data met the data quality objectives; and the results do not appear to exhibit a net bias.

CONCLUSIONS

Diligent adherence to the State regulations does not guarantee that a remediated property will be completely free of all residual MDMA. 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 apartment are presumed to contain *de minimis* MDMA 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 models⁷ 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 <u>require</u> the Industrial Hygienist to thus conclude that the area is compliant.

In this case, 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 19042 E 53rd Avenue, Denver, Colorado, compliant as defined in 6-CCR 1014-3. We recommend the property be immediately released for occupancy.

AIA

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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 REMEDIATOR'S SUBMITTALS

SEE ENCLOSED DVD

APPENDIX B POST-REMEDIATION PHOTOGRAPH LOG SHEET

POST-REMEDIATION PHOTOGRAPH LOG SHEET

FACTs project name: 19042 E 53rd Ave Form # ML9

Date: February 5, 2009

Reporting IH: Caoimhín P. Connell, Forensic IH

















Exterior

Exterior (2)

Exterior (3)

Furnace

Furnace (2)

Furnace (3)

Furnace (4)

Furnace (5)

















Furnace (6)

Furnace (7)

Furnace (8)

Garage

Garage (2)

Garage (3)

Kitchen

Kitchen (2)













Living room (2)







Ladder decon (2)















Master doset



NW BR



Powder Bath



Sample 1 (2)



Sample 1

Sample 2

Sample 3 (2)





Sample 4 (2)



Sample 4



Sample 5 (2)



Sample 5 (3)



Sample 5





Sample 6 (2)



Sample 6 (3)



Sample 6 (4)



Sample 6



Sample 7 (2)



Sample 7 (3)









Sample 11





Sample 13 (3)

Sample 13

Sample 14 (2)



Sample 14













APPENDIX C FINAL CERTIFICATION SIGNATURE SHEET

CERTIFICATION, VARIATIONS AND SIGNATURE SHEET

FACTs project name: 190	42 E 53rd Ave	Form # ML14
Date: March 6, 2009		
Reporting IH:	Caoimhín P. Connell, Forensi	c 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.	Call Coll
I do hereby certify that I conducted post-decontamination clearance sampling in accordance with 6 CCR 1014-3, §6.	Called
I do hereby certify that the cleanup standards established by 6 CCR 1014-3, § 7 have been met as evidenced by testing I conducted.	Callen
I do hereby certify that the analytical results reported here are faithfully reproduced.	Callen

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

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: March 6, 2009

APPENDIX D FIELD DATA SHEETS AND ANALYTICAL SUBMITTALS

SAMPLING FIELD FORM

FACTs project name: 53rd Ave MDMA	Form # ML17			
Date: February 5, 2009	Alcohol Lot#: AØ8Ø1 (AØ8Ø1 (Gauze Lot#: GØ9Ø1	GØ9Ø1
Reporting IH: Caoimhín P. Connell, Forensic IH	Preliminary	Interme	ntermediate	Final X

Location Space Substrate Result	Living Room/ Dining Room 1 $9x9$ ρrb $\partial \omega$	Kitchen/Pantry/Closet 2 ペメタ ウル Du	8 3 メタフ ディョ 1) W		Garage/Furnace 5 9 x 9 12 20 W.0	Stairs/Study/closet 6 175'x, 5 pm und	3R 7 9x4 12xn 12 m	NA	US Bath 8 4/4 P/JAShiC 8 4/4 P/JAShiC	NA NA	BR 9 9×9 100 100 100 100 100 100 100 100 100 10	Master BR 10 $\theta \times Q$ $\theta + 0$	Master Bath 11 Six metal	Master Closet	FURNACE SUDDIN (IN b.P. clo) 9X9 MOTAL
Area/ Volume/ Weight	Livi	Kitc	Pov	Lau	Gar	Sta	SW BR	BX	SN	BX	NW BR	Ma	Ma	Ma	7.4
Type	×	>	>	>	>	>	>	8	>	>	>	8	>	Μ	3
Sample ID MØØ8-	-Ø1	-02	-Ø3	-04	-05	90-	10- 12	8Ø-	60-	-1Ø	÷	-12	-13	-14	آد

Sample Types: W=Wipe; V=Microvacuum; A=Air; B=Bulk; L=liquid Surfaces: DW= Drywall, PW= Painted wood, LW= Laminated wood, VW= Varnished wood, M= Metal, C=Ceramic

4 Dom. Ware Course Parel	5 INSING MID DONG PANEL / LAT LLO aloseT)	, ל אלי	7 0011100	0	14 alilida	
*	4	X	3			

FORENSIC APPLICATIONS CONSULTING TECHNOLOGIES, INC.

Meth-lab Assessment Form © 2005

Page____of

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

Website: www.acilabs.com

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

Lab Reference:	09110-06	
Date Received:	February 12, 2009	
Date Completed:	February 16, 2009	

February 16, 2009

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

CLIENT REF: 53rd Ave MDMA

SAMPLES: wipes/15

ANALYSIS: 3,4 methylenedioxymethamphetamine (MDMA) & Methamphetamine by

Gas Chromatography-Mass Spectrometry.

RESULTS: in total micrograms (ug)

Sample	MDMA	Methamphetamine	% Surrogate Recovery
53E020509 - 01	< 0.030	not requested	97
53E020509 - 02	< 0.030	not requested	104
53E020509 - 03	0.037	not requested	104
53E020509 - 04	0.050	not requested	100
53E020509 - 05	0.039	not requested	105
53E020509 - 06	0.048	not requested	98
53E020509 - 07	< 0.030	not requested	98
53E020509 - 08	< 0.030	< 0.030	98
53E020509 - 09	0.041	not requested	106
53E020509 - 10	< 0.030	< 0.030	101
53E020509 - 11	< 0.030	not requested	104
53E020509 - 12	0.057	not requested	104
53E020509 - 13	5.51	not requested	104
53E020509 - 14	< 0.030	not requested	105
53E020509 - 15	1.40	not requested	80
QA/QC Method Blank	< 0.004	< 0.004	
QC ug Standard	(1.00) 0.977	(0.100) 0.102	'<': less than, no
QA ug Matrix Spike	(1.00) 0.961	(0.020) 0.018	
QA ug Matrix Spike Duplicate		(0.020) 0.018	detected above
Method Detection Limit (MDL)	0.004	0.004	the PQL
Practical Quantitation Limit (PQL)	0.030	0.030	

Robert M. Orheim

Director of Laboratories

ANALYTICAL CHEMISTRY INC.

CDL SAMPLING & CUSTODY FORM

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

Page 1 of 2

	MIA SAZON	Niamil C	Caoimhín P. Connell	PRINT NAME	C)											Number	LAB	SAMPLER NAME.	CAMDI ED M	eMail:		PROJECT Nar	SAMPLING DATE:	W
	NOT	CONNEL	. Conne	IAME	HAIN C											911						ne/No:	ATE:	ebsite:
0	aly	1 Wassingth	OINON	Signature	CHAIN OF CUSTODY RECORD	53EØ2Ø5Ø9-1Ø	53EØ2Ø5Ø9-Ø9	53EØ2Ø5Ø9-Ø8	53EØ2Ø5Ø9-Ø7	53EØ2Ø5Ø9-Ø6	53EØ2Ø5Ø9-Ø5	53EØ2Ø5Ø9-Ø4	53EØ2Ø5Ø9-Ø3	53EØ2Ø5Ø9-Ø2	53EØ2Ø5Ø9-Ø1	Sample Number		Caoimini F. Comien	Cosimbio B Cossoll	Fiosrach@aol.com		PROJECT Name/No: 53 rd Ave MDMA	Feb 5, 2009	Website: www.acilabs.com
	AC	:	FACTs, Inc.	COMPANY		×	×	×	×	×	×	×	×	×	×	Wipe								
	71	"	s, Inc.	DANY	Wipes Results in:												SAMPI	- HONE	PHONE	ADDRESS:		COMPANY:	REPORT TO:	
	2/	2	Ø2/¢	_	Resu											Vacuum	SAMPLE MATRIX						Carrie and the	FAA:
	2/12/09	٧	02/07/09	DATE	Its in:											Other	RIX	303-903-7494	70000	185 Bounty Hunters Lane, Bailey, CO 80421		Forensic Applications, Inc.	Caoimhín P. Connell	FAX: 200-022-4023
	1500	٤	1700	TIME	□ µg/	×		×								1	A	494	101	Hunters	11	aplica	P. Co.	-4023
	0	3		E	µg/100cm ²	×	×	×	×	×	×	×	×	×	×	2	ANALYSIS REQUESTS			Lane		ations	nnell	4
X	3	2	2	Turi	n ²	×	×	×	×	×	×	×	×	×	×	ယ	SIS F			, Bail		s, Inc		lease
X Routine	3 Days (1.5X)	2 Days (1.75X)	24 Hours (2X)	Turnaround Time	X	183										4	EQU			ey, СС		•		dor
Œ	(1.5)	(1.75	ırs (2)	nd Tii	Total µg											5 6	ESTS			804				ot wi
_					-g			5									-			21				itein
Lab File No.	Inspected By:	Temperature:	Container:	Custody Seals:	Total Numb (verified											COMMENTS	SAMPLER	6 Not Submitted	(J)	4			ANALY	Please do not write in shaded areas.
0911	MIA	Ambient	Intact	Yes	Total Number of Containers (verified by laboratory)											COMMENTS	LAB	mitted			I C COLITCIA	Methamphetamine Use entire contents	ANALYSIS REQUESTED	eas.
09110-06	MIA SAZON	Cooled	Broken	No	10	-								-		ITS Contained	Wood						STED	

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Page 2 of 2

SAMPLING DATE:		Feb 5, 2009	RE	REPORT TO:	caoimhín P. Connell	P. Cor	nell	ease	don	ot wr	itein	2	aded	aded area	Please do not write in shaded areas. ANALYSIS REQUESTED
CT Nar	ame/No:	PROJECT Name/No: 53'd Ave MDMA	CO	COMPANY:	Forensic Applications, Inc.	Applica	tions	Inc.					1 Met 2 Use		1 Methamphetamine 2 Use entire contents
eMail:		Fiosrach@aol.com	AL	ADDRESS:	185 Bounty Hunters Lane, Bailey, CO 80421	Hunters	Lane,	Baile	<	2	CO 8042	CO 80421	2 4	2 4	2 4
SAMPLER NAME:		Caoimhín P. Connell		PHONE	303-903-7494	7494							6 Not		6 Not Submitted
110				SAMPLE MATRIX	MATRIX	A	VALY	SIS RI		QUI	ANALYSIS REQUESTS		SAMI	SAMI	SAMI
Number		Sample Number	Wipe	Vacuum	Other	7	2	ယ		4	4 5 6	5 6	5 6	5 6 0	5 6 COMMENTS COI
		53EØ2Ø5Ø9-11	×				×	×							
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		53EØ2Ø5Ø9-13	×				×	×	10.00						
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		15	×				×	4 4	×	×	×	×	×	×	X reseived
			×												
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Q	HAIN O	CHAIN OF CUSTODY RECORD		Wipes Results in:	sults in:	□ µg/100cm ²	00cr	13				n ² 🗵 Total µg	X Total µg	X Total µg	
PRINT NAME	NAME	Signature	COMPANY	ş	DATE	TIME	т		Turn	Turnarou	Turnaround Tin	Turnaround Time C		Turnaround Time Custody Seals:	
Caoimhín P. Connell	. Conne	101101	FACTs, Inc.		02/07/09	1700			□ 24			24 Hours (2X)	24 Hours (2X)		24 Hours (2X)
Namh (Connell	1 Lead on W.	1, 6		3	3			2			2 Days (1.75X)	2 Days (1.75X)		2 Days (1.75X)
MIA SAZON	AZON	Step	23		2/12/09	15	00		3			3 Days (1.5X)	3 Days (1.5X)		3 Days (1.5X)
		0							N R	Noutine Routine	X Routine			☑ Routine Lab File No.	

SAMPLING FIELD FORM

FACTs project name: E 53 PI	Form # ML17
Date: February 25, 2009	Alcohol Lot#: AØ8Ø1 Gauze Lot#: GØ9Ø1
Reporting IH: Caoimhín P. Connell, Forensic IH	Preliminary X Intermediate Final

Sample ID E53MØ225 Ø9-	Туре	Area/ Volume/ Weight	Location	Func. Space	Dimensions in.	Substrate	Result
-Ø1	W	- U	Master Bathroom E wall above light switch		9X9	PDW	
-Ø2	W		Master Bathroom Closet		9X9	PDW	
	W						
	W						
	W						
	W						
	W						
	W						
	W						
	W						
	W						
	W					_	
	W					_	
	W					_	
	W					_	

Sample Types: W=Wipe; V=Microvacuum; A=Air; B=Buik; L=Ilquid Surfaces: DW= Drywall, P=Painted; W= Wood, L= Laminated, V= Varnished, M= Metal, C=Ceramic, PI=Plastic

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

Website: www.acilabs.com

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

Lab Reference:	09113-07
Date Received:	March 2, 2009
Date Completed:	March 4, 2009

March 4, 2009

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

CLIENT REF: E 53rd Ave

SAMPLES: wipes/2

ANALYSIS: 3,4 methylenedioxymethamphetamine (MDMA) by Gas Chromatography-

Mass Spectrometry.

RESULTS: in total micrograms (ug)

Sample	MDMA, ug	% Surrogate Recovery
E53M022509 - 01	< 0.030	90
E53M022509 - 02	< 0.030	93
QA/QC Method Blank	< 0.004	
QC 1.00 ug Standard	1.02	
QA 1.00 ug Matrix Spike	0.97	
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

H ANALYTICAL CHEMISTRY INC.

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> Page 1 of

Please do not write in shaded areas

SAMPLING DATE:	Feb 25, 2009	REPORT TO:	_	Caoimhín P. Connell	nell			ANALYSIS REQUESTED
PROJECT Name/No:	E 53'd Ave	COMPANY:		Forensic Applications, Inc.	ons, Inc.		1 Methamphetamine2 Use entire contents	hetam e conte
eMail:	Fiosrach@aol.com	ADDRESS:		185 Bounty Hunters Lane, Bailey, CO 80421	ane, Bailey, C	0 80421		
SAMPLER NAME:	Caoimhín P. Connell	PHONE		303-903-7494			5 Not Submitted	nitted
		SAN	SAMPLE MATRIX		ANALYSIS REQUESTS	UESTS	1/1	2 4 5
Number	Sample Number	Wipe V	Vacuum	Other 1	2 3 4	5 6	COMMENTS	COMMENTS
ES	ES3MØ225Ø9-Ø1	×	===		×		MMAMA	
	-62	×			×		MOMA	
CHAIN	CHAIN OF CUSTODY RECORD	Wipe	Wipes Results in:	'л:	×	Total µg	Total Number of Containers (verified by laboratory)	al Number of Contain (verified by labo rato gy
PRINT NAME	Signature	COMPANY	DATE	TIME	Turnaro	Turnaround Time	Custody Seals:	Yes
Caoimhín P. Connell	nell CINCM	FACTs, Inc.	Ø2/25/Ø9	1526		24 Hours (2X)	Container:	Intact
MIA SAZON	aly	ACI	3/2/09	9 1400		2 Days (1.75X)	Temperature:	Ambient
	0				□ з Рау	3 Days (1.5X)	Inspected By:	MIA SAZON
					X Routine	ne	Lab File No.	09113-07

APPENDIX E FINAL CLOSEOUT INVENTORY DOCUMENT

FINAL SAMPLING CHECKLIST

FACTs project name:	E 53 rd	Form # ML18
Date: March 7, 2009		
Reporting IH:	Caoimhín P. Connell, Forensi	c IH

Functional Space #	Collec Minim 500 cm ²	um of	General Sampling Considerations	
	Yes	No	Floor Space Area of Lab (ft²)	2,079
1	Х		One extra sample is required for every 500 ft ² of floor space >1,500ft ² . Enter number of extra samples required:	2
2	Х		Is the lab a motor vehicle?	No
3	Х		Does the lab contain motor vehicles?	No
4	Х		Enter number of motor vehicles associated with the lab:	0
5	Х		Are the vehicles considered functional spaces of the lab?	NA
6	X		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
7	Х		Enter number of large vehicles (campers, trailers, etc)	0
8	X		One extra sample is required for every 50 ft ² of floor space of large vehicles. Enter number of extra samples required:	0
9	Х		One BX must be included for every 10 samples. Enter the number of BX required.	
10	Х		Enter Number of Functional Spaces to be included	13
11	Х		Enter total number of samples/BXs required	15
12	X		Enter total number of samples/BXs actually collected	15
13	Not req	uired	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 F INDUSTRIAL HYGIENIST'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:	E 53rd	Form # ML15
Date: March 7, 2009		
Reporting IH:	Caoimhín P. Connell, Forensi	c 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 methlab) 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 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 (Certification Number B-10670); he is a member of the Colorado Drug Investigators Association, the American Industrial Hygiene Association, and the Occupational Hygiene Society of Ireland.

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 lowa 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 110 assessments in illegal drug labs, and collected over 1,200 samples during assessments.

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 an author of a recent (2007) AIHA Publication on methlab assessment and remediation.

APPENDIX G LEAD AND MERCURY WIPE RESULTS

Neals Improvements, LLC 19042 East 53rd Avenue Project Number E07242.EC April 17, 2007 Page 6

2.2 Preliminary Assessment Sampling Results

TABLE I LEAD SAMPLING RESULTS 19042 East 53rd Avenue Denver, Colorado April 6, 2007

Sample ID	Functional Space (FS) Sampled	Sample Type and Area	Laboratory Result (µg/sample)	*Contamination Above Limit
242-01A	Garage	Composite Wipe 500 cm ²	<2	No
242-02A	Ventilation System	Composite Wipe 500 cm ²	5.3	Yes
242-03A	Living spaces in home- Second floor hallway bathroom ceiling	Discrete Wipe 100 cm ²	<2	No
242-04A	Living spaces in home- Second floor master bedroom, west wall	Discrete Wipe 100 cm ²	<2	No
242-05A	Living spaces in home- First floor powder bathroom ledge	Discrete Wipe 100 cm²	<2	No
242-06A	Living spaces in home- Kitchen wall behind stove	Discrete Wipe 100 cm²	<2	No
242-07A	Living spaces in home- Laundry room wall adjacent to garage	Discrete Wipe (duplicate) 100 cm²	<2	No
242- 0 7A 1	Living spaces in home- Laundry room wall adjacent to garage	Discrete Wipe (duplicate) 100 cm²	<2	No
242-08A	Field Blank		< 0.030	

Legend:

μg/sample = micrograms of lead per sample

*Calculated limit for composite samples = 0.09 µg/sample

^{*}Limit for lead is ~4.5 µg/100 cm2 (micrograms per 100 square centimeter of area) or 40 µg/ft2.

Neals Improvements, LLC 19042 East 53rd Avenue Project Number E07242.EC April 17, 2007 Page 7

TABLE II MERCURY SAMPLING RESULTS 19042 East 53rd Avenue Denver, Colorado April 6, 2007

Sample ID	Functional Space (FS) Sampled	Sample Type and Area	Laboratory Result (µg/sample)	*Contamination Above Limit
242-01B	Garage	Composite Wipe 500 cm ²	<0.02	No
242-02B	Ventilation System	Composite Wipe 500 cm ²	<0.02	No
242-03B	Living Spaces in Home- Second floor hallway bathroom ceiling	Discrete Wipe 100 cm²	<0.02	No
242-04B	Living Spaces in Home- Second floor master bedroom, west wall	Discrete Wipe 100 cm ²	<0.02	No
242-05B	Living Spaces in Home- First floor powder bathroom ledge	Discrete Wipe 100 cm²	<0.02	No
242-06B	Living Spaces in Home- Kitchen wall behind stove	Discrete Wipe 100 cm²	<0.02	No
242-07B	Living Spaces in Home- Laundry room wall adjacent to garage	Discrete Wipe (duplicate) 100 cm ⁻¹	<0.02	No
242-07B 1	Living Spaces in Home- Laundry room wall adjacent to garage	Discrete Wipe (duplicate) 100 cm²	<0.02	No
242-08B	Field Blank		< 0.02	No

Legend:

µg/sample = micrograms of mercury per sample

APPENDIX H COMPACT DIGITAL DISC