MINERVA ENTERPR 9000 Minerva Rd. P.O. i Waynesburg, OH 44688	36x 709	Customar Nama	1	Tickel # 2470 Date 09/07/20 Cime: 7.34:10 A	11
Ph 330-866-3435 Fax 330-866-3468	+	PUCISION			
Customer# -	Kurtz Brothers WIL	Gross \	Weight Weight	- 70,0 -34.0 - 18TO	00 20
Truck Type Truck License #	Tandem dump	Net Weight		1810	J. W.
Location	165 OH, Euclid	Was	на Тура:	Fnable Asbestos	
Generator ME REPIP 0.#	Former Cleveland	Minerva	5 JOD #	10318	
Accepted	Yes If No, this m	sterial was rejected for the	following reasons		-
Driver Lane	Ru	Minery a Enteroris	ses Raprasentativ	· J. Alla	
I centry that all mater County/ento EPA spi	nals meet Stark actifications			n this licket has been propi state and federal regulation	arly ns.

PRECISION ENVIRONMENTAL CO.

06094

1. Work site same and stalling address	Owner's same	1	Owner's telepho	no stant per
20180 ST CLAIR AVE	ARY TRIBAG, TRU 1 CYTTER AVE KROK, ON 44305	STEE :	330-762- <del>7</del> 3	7
2. Operator's name and address PRECISION ENVIRONMENTAL CO. 3500 CRI Brecks/file Read. Independence, Unio 44131			Operators's tells (216) 642 6940	plane merske
3. Whate disposal the (WDS) name, mading address, and physical name, name	cal site lecativa		WD\$ plages out 330 -865 -34.	AU 52
4. Name, and address of papersible agency (Lord, District or CLEVELAND DIV OR AIR, 78 ENIEVIEW SIZE				1511
5. Description of magazinis	4. Container	Type		granting or cubic your
ACM BUILDING DERAS		MP, Tan		YARD
8. Special heading instructions and additional information WASSOCIATEY CONTACT: DESCRIPTION PARTIES.	NIMENTAL (216) 642	-6040		
EMERGENCY CONTACT: PRECISION ENVIRO  9. Gettrator's CENTIFICATION: I hereby declare that the proper shipping stems and are classified, packed, marked and in according to applicable fature mailsonal and government regulation.	cantents of this townigum includ, and are in all respon	est are fully so	d securately desc addition for transp	Thed above been by tighted
EMERGENCY CONTACT: PRECISION ENVIRO  9. OPERATOR'S CERTIFICATION: I hereby declars that the proper shipping uness and gree classified, packed, parked and in according to applicable bette maileand and government regulation  **EMPLY YATES SUPFRUE Printed/application  14. Transporter 1 (Acknowledgment of receipt of materials)	cantents of this townigum includ, and are in all respon	est are fully so	d securately deep addition for transp Distr (NID)	ert by bilghon '-フィル
EMERGENCY CONTACT: PRECISION ENVIRO  5. OPERATOR'S CENTIFICATION: I hereby declare that the proper shipping some and are classified, packed, marked and in according to applicable internalismal and government regulation.	cantents of this townigum includ, and are in all respon	est are fully so	Date (NID	ert by bilgion アーフレ /
EMERGENCY CONTACT: PRECISION ENVIRO  9. OPERATOR'S CENTIFICATION: I hereby declary that the proper stripping uses and are classified, packed, parked and is according to applicable between addendand and government regulation  **EMNY YNTES SUPERIOR  Title  14. Transporter 1 (Acknowledgment of receipt of stateorials)  Address and telephone as  **TOP RECEGO DRUGO  **DRUGO  **DRUGO  **DRUGO  **DRUGO  **DRUGO  **DRUGO  **DRUGO  **DRUGO  **TOP RECEGO  **DRUGO  **TOP RECEGO  **DRUGO  **TOP RECEGO  **TOP RECEG	contains of this complying shelpd, and are in all respect	est are fully so	Date (NIT)	2-1/
EMERGENCY CONTACT: PRECISION ENVIRO  9. OPERATOR'S CERTIFICATION: I hereby declare that the proper integring usons and are classified, packed, marked and is according to applicable between allowed and government regulation  **EMPLY YATES SUPFRIE  Principal packed  11. Transporter 1 (Astro-orded general of receipt of protectical)  Address and telephone us  **Total Principal Contact of packed of protectical packed  **Contact Types diamen**  11. Transporter 2 (Astro-orded general of receipt of materials)	cassants of this consignment of the consignment of the consistence of	est are fully so	Date (NIT)	2-11 077)
PAMERGENCY CONTACT: PRECISION ENVIRO  9. OPERATOR'S CERTIFICATION: I hereby declare that the proper shipping uses and are classified, packed, marked and in according to applicable between and and government regulation.  **EMPLY PATES SUPFRIVE  Transporter 1 (Acknowledgment of receipt of materials)  Address and inlephone as  **Transporter 2 (Acknowledgment of receipt of materials)  Address and telephone no  11. Transporter 2 (Acknowledgment of receipt of materials)  Address and telephone no	contents of this consignment of the consignment of the consistency of	est are fully so	Date (NI/I)  Date (NI/I)	2-11 077)

JLLP-PRECISION 000210

Truck License # 185 Volume F Location OH, Euclid	Ticket # 247086 Date 09/07/2011 Time 1.44.34 PM  Gross Weight: 0.76 0.00 Tare Weight 0.31/, 0.00 Hecleved(yards) 35 Waste Type Frieble Asbestos Minery a Job # 105/9
ME REPIP D # ard  Accepted Yes If No, this meterial was rejected  Driver Minera E  Centify that all meterials meet Stark  County/ohio EPA specifications disposed of in-	enterprises Representative hat the waste specified on this licker has been properly accordance with all local, state and federal regulations.

248815

## PRECISION ENVIRONMENTAL CO.

REGULATED ASBESTOS MATERIAL: EPA WASTE SHIPMENT RECORD
RQ, Waste, Asbestos, 9, NA2212, PGIII

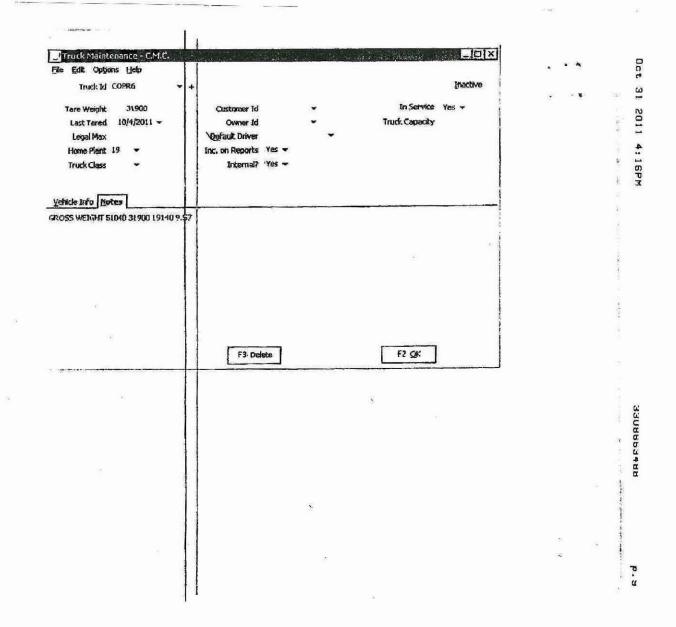
	CLEVELAND TRENCHER 20100 ST CLAIR	Owner's name ARY THOMAS , I COTTER AV KRON , OH		Owner's Celephone number 350 - 752 - 7377
GENER	2. Operator's name and address PRECISION ENVIRONMENTAL CO. 5500 Did Brecket-life Road. Independence, Ohio 4413 I			Operators's telephung bushber (216) 642-6040
A T O R	3. Weste dispusal site (WDS) name, malling address, and physic MINERVA ENTERPRISES 9000 MINERVA ED 9AVNESBURG, OH 4:1608	cal sky lozation	,	WDS phose number 330 – 866 ~ 3435
	4. Name, and address of responsible agency (Local, District or CLEVELAND DIV OF AIR, 75 ERTEVIEW PLA			,
$\prod$	5. Description of materials	6. Co Number	Type	), Lotal quantity ouble meters or colde yards
	ACM BUILDING DERRIS	/	DUMPSTER	2 1 YAR DC
	8. Special handling instructions and additional information  EMERGENCY CONTACT: PRECISION ENVIRO	ONMENTAL (21	6) 642-6040	
	9. OPERATOR'S CERTIFICATION: I heroby declare that the proper shipping name and we classified, packed, marked and to according to applicable international and government regulated to the control of the	labeled, and are in a ons		
T A N S	10. Transporter L (Acknowledgment of receipt of materials) Address and telephone ra	KURTEN C	TROS	1011.11
ORTER	11. Transporter 2 (Acknowledgment of receipt of materials) Address and telephone no	STATES.	ADBACE OFF	Date (MADD/YY)
	Printed/typed name Tiffe	Signatura		Date (M/OD/YY)
A S T E	12. Discrepancy indication space			
SIT	13. Waste disposal site owner or operator. Certification of rec	reipt of usbestos man	erials by this manifest	except as noted in Item
Ē	Pristed typed name Title	Signature		Date (M/DD/YY)

Precision - White

Transporter - Yellow

Unloading Area - Pink

Project Site - Gold



MINERVA ENTERPR 9000 Minerve Rd. 17.0, 1 Waynesburg, OH 4 (868) Ph. 330-888-3456 Fax: 330-888-3469	Bax 709 Custon	nor Name emental Company	Ticket & Dete Ticke:	248814 10/11/2011 2:46:24 PM
Custome: #	224	Gross Watght:	5886	OX
Transport in the control of the cont	Cooper Disposal	Tare Weight:	3280	00
Truck Tyre:	20 cuya Roll-off	Net Weight(tons):	12.9	15
Truck License R	6.0	Volume Reclaved (years):		20
Location:	OH, Euslid	Wasta Typa:	Frishbo /	lisbestos .
Generator.	Former Clay sland	MUNEAR TOO K	e euclid, on "Fi	
ME REPPOR				
Accepted	Yes If No this material	was rejected for the following ree	sons	
			T	
		20 d	1/	JAH
Driver,		Minima Enterprises Represen	7 1000	MAM
County that all thate County/oldo EFV sp	irials meat Stark T ecoloations.	his certifies that the weste specifi sposed of in secondance with all	ad on this licked ocsi, state and l	has been properly ecoral regulations

PRECISION ENVIRONMENTAL CO.
REGULATED ASBESTOS MATERIAL: EPA WASTE SHIPMENT RECORD
RQ, Waste, Asbestos, 9, NA2212, PGIII

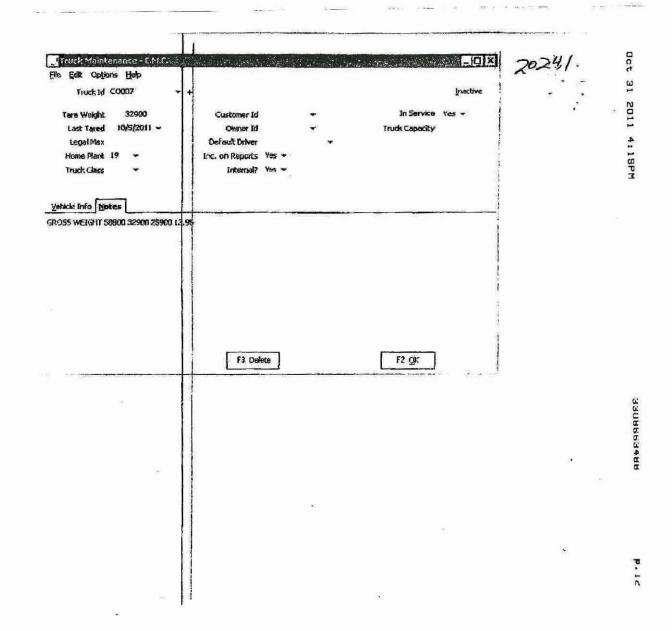
	1. Worksite made and mailing address CLEVELAND TRENCHER 20100 ST CLAIR CLEVELAND, OH 1105205	Owner's name JARY THOMAS, 71 COTTER AVI AKRON, ON		Ovner's tolephone n 330 -752 -7377	umber
GENER	2. Operator's name oud address PRECISION ENVIROUMENTAL CO. \$500 Old Breaksville Road. Independence, Ohio 44   3			Operators's telephon (2 16) 642 6040	te number
A T	3. Whate disposal site (WDS) name, mailing address, and plys ISINERVA ENTERPRISES 9000 MINERVA RB WAYHESBURG, OH 44688	sical site focution		WDS phone number 330–886 <b>–</b> 3435	
	4: Name, and address of responsible agency. (Local, District of CLEVELAND DIV OF AIR, 75 ERIEVIEW PI			,	
	5. Description of materials	6, Con Number	dulnera.	7. Tetal qua	
	ACM BUIDING DEBRIS	·	DOWPSTES	cubic metery or c	R.Ds
1	8. Special handling instructions and additional information	t	<del></del>		
+	EMERGENCY CONTACT: PRECISION ENVIR	OWNERTAL (2h	5) 642-6040	<del></del> -	
	9. OPERATOR'S CERTIFICATION: I horsby declare that a proper shipping name and are classified, packed, marked and according to applicable informational and government regular than the property of the propert	labeled, and are in al liose			lsy highway
T R	10. Transporter 1 (Acknowledgment of receipt of materials)				
A	Address and telephone no			٠.	a
N S	Mylon Barricon Druce	- Kurte B	ROS	7 .	30111
D D	Printed types name Title	Stepter	LNGER LDENCE OR	Date (M/DIJ/Y	Y
R	11. Transporter 2 (Acknowledgment of receipt of materials) Address and telephone no	INDER CR	DENUE, UM		1
R	Swieder De J. Tille Dider	Signature		Date (MVDDIV	7/
₩	12. Discrepancy indication space				
A S					
T E					İ
5	13. Waste disposal site owner or operator. Certification of re	ceipt of ushestes mat-	erials by this manifest	except as no tod in ite	iro ,
T E	Kristialogo	_KXQ	<i>b</i> )	Date (Marrier	11

Precision - White

Transporter - Yellow

Unloading Area - Pink

Project Site - Gold



MINERVA ENTERPRISES, IN Ticket # 247128 9000 Minery a Rd P O Box 709 Date 09/08/2011 Waynesburg, OH 44688 Customer Name Ph 330-866-3435 Time 8:48:24 AM Fex 330-866-3486 Customer # Gross Weight Transporterr Kurtz Brothers Tare Weight Trailer dump Truck Type Net Weight (tons). Volume Recieved(yards). Truck License # 187 Waste Typa Location OH, Euclid Fneble Asbestos Generator Minerys Job # Former Claveland ME REP/P.O.# Accepted Y85 If No, this material was rejected for the following reasons. Minera Enterprises Representative I certify that all meterials meet Stark County/onio EPA specifications This centifies that the waste specified on this ticket has been disposed of in accordance with all local, state and faderal reg

06097

REGULATED ASBESTOS MATERIAL: EPA WASTE SHIPMENT RECORD RQ, Waste, Asbestos, 9, NA2212, PGIII

FORMER CLEVELAND TREMEMEN 20100 ST CLRIR AVE FOCLID, OR 1105205	Owder's same ANT THIMAS L CUTTER A KEDR, OH 4	WE	Owner's telephone number
2. Operator's name and strices PRECISION ENVIRONMENTAL CQ 23()  \$500 Old Breckwille Road, Independence, Ohio 44131	9 C1 37 (1)		Operators's telephone number (216) 642 6040 76,000
3. Wante disposal site (WDS) name, insiling address, and physic MINERYA ENTERPRESES FORM MINERYA RD SATERSONS, CH 41688	al site location.		WDS phone number 330-866-3435
4. Name, and address of responsible agency (Lorst, District of I TLEVELAND DIV ON AIR; 75 PRICEVIEW PLA			
5. Description of materials	6. C Number	onthiners Type	7. Total quantity cubic meters or cubic yards
ACM BUILDING DEBRIS	1	DOMP TRUCK	60 YARDS
BMBRGENCY CONTACT: PRECISION ENVIRO  9. OPERATOR'S CERTIFICATION: I hereby decides that the proper shipping name and are classified, packed, murited said is according to applicable international and government regulation.  **ENNY YATES SUPER US  Pratedryped name**  Title**  Title**  **Title**  **	edutents of this s beled, and are in	consignment are fully as	
10. Prensporter I (Acknowledgment of receipt of materials) Address and suspicone its  Day of Miller Driver Printed/syped name	O <sub>O</sub>	pid L. Mul	Date (M/DD/YY)
Transporter 2 (Acknowledgment of receipt of materials)     Address and telephone no	Muriz 6415 (Z)		
Printed/typed name Title	Signatur		Date (M/DD/YY)
12. Discrepancy indication space			
15. Warrd disposal site owner or operator. Cordification of received the same of the contract	pt of anhestos ma	KXOH	except as noted in item

Precision - White

Transporter - Yellow

Unloading Area - Pink

Project Site - Gold

Oct 31 2011 3:38PM

Shipper: KBI EPG-NOH (ZZ120) 6415 GRANGER ROAD INDEPENDENCE,OH (216) 986-7000

Trip Summary Sheet 9/7/2011 11.55:32 Order# 138880 Movement: 139171

Consignes: PRE1003-0964 (PR2205) 20100 ST. CLAIR AVE CLEVELAND TRENCH CLEVELAND, OH (000) 000-0000

Tractor: K0187

Ref#

REF 11249.0056-008

Segment Ref:

Trip Segment: 148640

SOPNUM 120S00493474

REF 11249.0056-C

Page 1/1

Driver 1: MILDA MILLER DAVID Driver 2: UNKNOWN UNKNOWN

Status: Dispatcher

Order # 138880 - HAULING MATERIAL TO MINERVA [NET30: 425.61000]

Truck Attribute: 6 AXLE, QUAD, SE

Haul: UNKNOWN

Bill-To: PRECISION ENV/RONMENTAL CO. (PRE1003) 5500 OLD BRECKSVILLE ROAD

INDEPENDENCE OH (216) 642-6040

Count Weight Cmd Miles Earliest Date Latest Date Arrival Date Est Freight Ref#s Description D UNK 11003000 CARTAGE ONLY-KB 09/06 06:28 09/06 06:29 Trailer 1: UNKNOWN Trailer 2: UNKNOWN

KBI EPG-NOH (ZZ120) 6415 GRANGER ROAD INDEPENDENCE, CH (216) 985-7000

Weight Cmd Description Miles Earliest Date Latest Date Arrival Date Est Count Freight Ref#s 9 UNK 11003000 CARTAGE ONLY-KB 8 09/06 08:30 09/06 16:30 Trailer 1: UNKNOWN UNKNOWN Trailer 2:

PRE1003-0964 (PR2205) 20100 ST. CLAIR AVE **CLEVELAND TRENCH** CLEVELAND, OH (000) 000-0000

Total Miles:

Load Requirements:

	092
Ph. 330-868-3435 Fex: 330-868-3488	Ticket # 247024  Data: 09/07/2011  Time: 7:34:03 AM  2 Drainors
Customer # 300 204 Will Transporter Kurtz Brothers Truck Type. Tandem dump Truck License # 184 Location OH, Euclid Generator Former Claveland	Gross Weight  Tara Weight  Net Weight(nons)  Volume Rectered(yards)  Wasta Type:  Minary a Job # 2500
Omeso Das Bellia	at was rejected for the following reasons.  Identifies a Emercises Representative:  This certifies that the weste specified on this ticket has been probably disposed of in accordance with all local, state and federal regulations

	19	0		
>		X		14
1	-	A	de:	1
-	7	ij,	-	
14	3	10	× -	

## PRECISION ENVIRONMENTAL CO.

06092

REGULATED ASBESTOS MATERIAL: EPA WASTE SHIPMENT RECORD

RO, Waste, Asbestos, 9, NA2212, PGIII

247021

	- 1	Iwner's name		Owner's telephone nun	aber
HYMER CLEVELAND TREMERED 0100 ST CLAIR AVE WILID, OR 105203	_ ]	NET TROMAS, L COTTER AVE (RDM, OR 443)		330-762-7377	
2. Operator's same and address PRECISION ENVIRONMENTAL CO. S. S. 500 Old Brecksville Road. Independence, Ohio 4413:	y whi	Ulision		Operators's telephone (216) 642 6040	OOO
3. Watte disposal site (WDS) caine, mailing addi		at elte biruttas		WDS phone number	OX.
HEDVA ESTERVELIES NOU MISERVA DO NIMESUUS, OR 44606				330-866-3435	
4. Name, and address of responsible agency (Les LEVELAND DIV OF ASR, 75 FRII		The second secon		7	
5. Description of materials		6. Cointa Number	Type	7. Total quant cubic meters or cab	
ACM BUILDING DEB	RIS.		DUMPTRUG	3 <i>5 Y</i> A	ADS
	100				
하는 사람이 보다가 있다고 그렇게 그리는 그리는 사람이 되었다.			<u>k 4 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -</u>	i de propins	*
EMERGENCY CONTACT: PRECISION OF	ON ENVIROR  declare that the user kell and lat	contests of this const belod, and are in all r	gnancut are fully as	endition for transport by	bave by highway
<ol> <li>OPERATOR'S CERTIFICATION: I hereby of proper shipping name and are classified, packed, according to applicable international and govern</li> </ol>	ON ENVIROR  declare that the smarked and lat ment regulation	contracts of this consi belod, and are in all r	gnancut are fully as	m accurately described a soldition for transport by Date (MIDDIYY)	bore by
EMERGENCY CONTACT: PRECISION OF THE CONTACT: PRECISION OF THE PROPERTY CONTACT: PRECISION OF THE PROPERTY OF T	ON ENVIROR  declare that the sparked and lat ment regulation  (PFA VIS  of materials)	eontains of this cousine belot, and are in all ring.  Gigmature  Signature  RUPCE BRG  SAIS CR AM	guntent ste tally an expects in proper el	Date (MIDDIYY)  Date (MIDDIYY)	bove by highway
EMERGENCY CONTACT: PRECISION OF PRINCE OF PRECISION OF PRINCE OF PRECISION OF PRINCE OF PRECISION OF PRINCE OF PRINCE OF PRECISION OF PRINCE OF PRI	ON ENVIROR  declare that the sparked and lat ment regulation  (PFA VIS  of materials)	eontains of this cousine belot, and are in all ring.  Gigmature  Signature  RUPCE BRG  SAIS CR AM	geneent are fully an expecte in proper of	Date (MIDDIYY)  Date (MIDDIYY)	highway  //

## 06050

## PRECISION ENVIRONMENTAL CO.

REGULATED ASBESTOS MATERIAL: EPA WASTE SHIPMENT RECORD

RQ, Waste, Asbestos, 9, NA2212, PGIII

70770

				011000
	1. Work site name and mailing address	Owner's name		Owner's telephone number
	FORMER CLEVERAND TRENCHER 20100 ST CLAIR AVE EVCLID, OH 1105205	GARY THOMAS 71 COTTER S AKRON OF	WE	330-752-7377
G E N	2. Operator's name and address PRECISION ENVIRONMENTAL, CO. 5500 Old Brecksville Road. Independence, Ohio 44131			Operators's telephone number (216) 642 6040
R A T	3. Waste disposal site (WDS) name, mailing address, and	physical site location		WDS phone number
Ö R	MINERTA ENTERPRISES 9000 MINERVA DD WAYNESDURG, DE 44638			330-868-3435
	4. Name, and address of responsible agency (Local, Distr	ict or EPA office where i	notification was sent)	
11	CLEVELAND DIV OF AIR, 75 ERIEVIE			Many Marketines
11	5. Description of materials	6. Co Number	ontainers Type	7. Total quantity cubic meters or cubic yards
	ACM BUILDING DEBRI		DUMP STER	304APB5
	8. Special handling instructions and additional informati EMERGENCY CONTACT PRECISION EN		6) 642-6040	
1	9. OPERATOR'S CERTIFICATION: I hereby declare the		onsignment are fully an	
	proper shipping name and are classified, packed, marked according to applicable international and government reg	and labeled, and are in a	ll respects in proper co	
T R	according to applicable international and government reg	and labeled, and are in a gulations  PUISURE Signature	Il respects in proper co	ndition for transport by highway
	according to applicable international and government reg    Frinted/typed name	and labeled, and are in a culations  PVISOR Signature als)	Il respects in proper co	Date (M/DD/YY)
R A N S	according to applicable international and government reg	and labeled, and are in a plations  PVISUA Signature als)  Signature	Il respects in proper co	Date (M/DD/YY)
R A N S P O R	according to applicable international and government reg    LENT   LATES   SUPE	and labeled, and are in a plations  PVISUA Signature als)  Signature	L Dy	Date (M/DD/YY)
R A N S P O R T E R	according to applicable international and government reg    LENTY   ATTES   SUPE	and labeled, and are in a platforms  PVISOR Signature als)  Signature  Signature  Signature	L Dy	Date (M/DD/YY)  9 - 9 - 11 Date (M/DD/YY)
R A N S P O R T E R	according to applicable international and government reg    Frinted/typed name	and labeled, and are in a platforms  Signature  als)  Signature  Signature  Signature	L Dy	Date (M/DD/YY)  Date (M/DD/YY)  Date (M/DD/YY)

Precision White

Transporter - Yellow

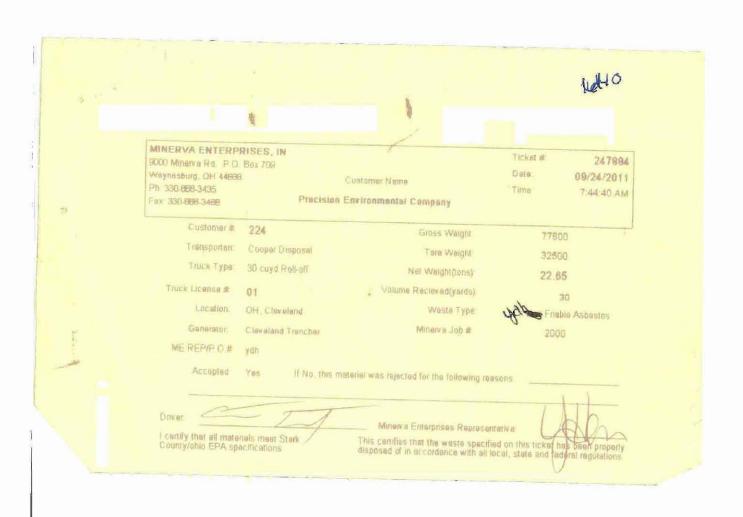
Project Site · Gold

Unloading Area - Pink

Ticket # MINERVA ENTERPRISES, IN 247205 9000 Minerya Rd. P.O. Box 709 Detail 09/09/2011 Waynesburg, OH 44999 Customer Name 9:49:27 AM Ph 330-668-3435 Precision Environmental Company Fax 330-866-3466 Gross Weight Customer # 52180 224 Tare Weight 40640 Transporter: Southside Environ Truck Type: Trailer dump Net Weight (tens) 5.77 Volume Recieved(yerds). 30 Truck License # 53 Waste Type Friable Asbestos Location DH, Euclid Minerca Jeb # 2000 Generator. Former Crevatend ME REPIP 0# 800 Accepted. Ye5 If No, this material was rejected for the following reasons Minerya Enterprises Representative County/ohio EPA specifications This cartifies that the waste specified on this ticket has been properly disposed of in accordance with all local, state and federal regulations.

# PRECISION ENVIRONMENTAL CO. REGULATED ASBESTOS MATERIAL: EPA WASTE SHIPMENT RECORD RQ, Waste, Asbestos, 9, NA2212, PGIII A C D GO V

1. Work site name and mailing address			
20100 ST CLAIR	Owner's name DARY INDIAS, INU: YI COTIFE AVE AKRON, OH	a contract of the contract of	Owner's telephone number
2. Operator's name and address PRECISION ENVIRONMENTAL CO. 5500 Old Brecksville Road. Independence, Ohio 44131			Operators's telephone numbe (216) 642 6040
3. Waste disposal site (WDS) name, mailing address, and phys MINERVA ENTERPRISES 5007 MINERVA, RD SAYNESBURG, OH 44538	sical site location	1	WDS phone number 30 -866 -3435
4. Name, and address of responsible agency (Local, District or LEVELAND DIV OF AIR, 75 ERREVIEW PL	ASA, CLEVELAND,	OH	
5. Description of materials	6. Containers Number	Туре	7. Total quantity cubic meters or cubic yar
ACM BUILDING DEBRIS	1 Dui	APSTER	30 yo
9. OPERATOR'S CERTIFICATION: I hereby declare that the proper shipping name and are classified, packed, marked and according to applicable international and government regulations.	ne contents of this consignme labeled, and are in all respect ons	nt are fully and	
MENNY / HIES SUPERVISO			9-21-11
Address and telephone no	Signaturo  RURTZ ERCS  Signaturo  AURTZ ERCS	Z	9-21-1/ Date (M/DD/YY)  9/22/11  Date (M/DD/YY)
10. Transporter 1 (Acknowledgment of receipt of materials) Address and telephone no  STEVE FEWER DELVEP Printed/typed name  Title  11. Transporter 2 (Acknowledgment of receipt of materials)	NU ROZ BROS	2 2 	9/22/11



## EXHIBIT 4

2812 Shakercrest Blvd. Beachwood, Ohio 44122

Phone (216) 378-0997 FAX (216) 464-6290

#### ASBESTOS MONITORING REPORT

## CLEVELAND TRENCHER 20100 St. Clair Ave Euclid, Ohio

#### Prepared For:

Precision Environmental Company 5500 Old Brecksville Road Independence, Ohio 44131

#### Prepared By:

RCS Environmental Group, Ltd. 2812 Shakercrest Blvd, Beachwood, Oho 44122 (216) 378-0997

#### Date:

October 31, 2011

Project No.

201128

#### CERTIFICATE OF ACCURACY AND COMPLETENESS

RCS Environmental conducted the Asbestos Monitoring in a manner consistent with sound engineering practice and with professional judgment. The conclusions and recommendations presented in the Asbestos Monitoring Report are based on the level of effort and investigative techniques defined under the scope of work by Precision Environmental and RCS Environmental. No other warranty or guarantee, expressed or implied, is made.

Qualified consultants performed the sampling and analysis with diligence and in accordance with regulatory and/or accepted industry practice. RCS Environmental Group, Ltd. certifies that the information presented herein is accurate and complete as described.

I certify that I have reviewed this document:

Michael Schmidt, CIH,

President



Cleveland Trencher

Page 1

#### TABLE OF CONTENTS

SECTIONS		Page Number	
Summary Re	port	1	
Section I	Summary of Asbestos Abatement Work	2	
Section II	Description of Protective Controls	2	
Section III	Air Sampling Plan	3	
Section IV	Comments and Follow-up Action	4	

### **SECTION**

Section 1	TEM Air Monitoring Data Sheets
Section 2	PCM Air Monitoring Data Sheets
Section 3	Daily Field Logs
Section 4	Certifications



#### ASBESTOS AIR MONITORING SUMMARY

Consultant: RCS Environmental Group, Ltd.

2812 Shakercrest Blvd. Beachwood, Ohio 44122

Contractor: Precision Environmental Company

5500 Old Brecksville Road Independence, Ohio 44131

Location: Cleveland Trencher

20100 St. Clair Ave. Euclid, Ohio

Scope of Work: Removal of asbestos debris from abandon concrete pads

from demolished buildings and soil.

Project Monitors: Michael Schmidt, CIH

Ohio Department of Health

Asbestos Hazard Evaluation Specialist

Asbestos Project Designer

Cecil Brannon

Ohio Department of Health

Asbestos Hazard Evaluation Specialist

Project Date(s): August 23 through October 4, 2011

Cleveland Trencher Page 1

#### I. Summary Asbestos Abatement Work

The asbestos decontamination work performed during this project consisted of the following:

The former Cleveland Trencher property (20100 St. Clair Ave.) is located on 14 1 acres including 140,000 square feet of building in the heart of Euclid's industrial zone.

From the 1920s until around 2000, the site was used by Cleveland Trencher to fabricate, paint and assemble metal components for trenching and excavating equipment. In 2007, asbestos abatement of the property was initiated and demolition of several buildings was conducted by others. The asbestos abatement activities were deemed inadequate and the project has halted. Asbestos remained in existing buildings, on the ground, and on the demolished building concrete pads. The US EPA reports indicate that OEPA found not only asbestos at the location, but also 120 drums and containers of materials, primarily lead paints, oils, and solvents.

Precision Environmental was contracted to finish the abatement activities abandoned by others. This included the completion of the asbestos abatement activities and the proper removal and disposal of the identified drums.

#### II. Description of Protective Controls

A. <u>Decontamination Facility</u>: A Decontamination Facility (DF) was constructed within the Support Zone of the project. The DF consisted of a clean room, shower room, and an equipment (dirty) room. Each chamber was separated by air locks using a series of polyethylene flaps and/or doors.

All workers were required to decontaminate each time they left the work area. All equipment was showered out or wet wiped before being removed from the decontamination facility Wastewater was removed from the shower by a two-stage filtering pump fitted with a 5-micron final filter

A separate area was constructed for the decontamination of the waste trucks. A concrete pad was constructed with a drain for wastewater Each truck had its tires and under carriage washed with water from pressure washers before leaving the project site. All wastewater was collected and filtered by a two-stage filtering pump fitted with a 5-micron final filter

B. Personal Protective Equipment: During removal activities workers donned half-face air purifying respirators equipped with High Efficiency Particulate Air (HEPA) filters. In addition, workers wore full body Tyvek suits with head and foot coverings. Safety equipment also included the use of safety glasses and work boots. All personal protective equipment was disposed of or decontaminated prior to the worker leaving the work area.

Cleveland Trencher Page 2

#### III. Air Sampling Plan

The Asbestos Sampling Plan (ASP) was used as a guide for the abatement and cleanup activities being conducted at Cleveland Trencher The ASP is the framework for conducting environmental monitoring during a complex asbestos abatement project.

The ASP determined the exposure pathways of potential receptor populations. It was important to consider multiple pathways, age and duration of exposure of said populations.

The site location is located in an industrial area with a significant portion of the buildings being vacant. Directly east southeast, is a large grassy/wooded area. No residential properties are located in the immediate area of the project work area. Based on visual inspections of field conditions the follow distinct receptor populations were considered:

- Asbestos Workers
- Authorized Visitors to the Site
- Inspectors
- Down Wind Occupants of Industrial Buildings.

#### A. Air Monitoring General

All laboratory analysis was conducted by International Asbestos Testing Laboratories (IATL). IATL is certified by AHIA and NAVLAP. All samples were sent to the laboratory under Chain of Custody procedures. All sampling equipment was calibrated daily in the field with a rotameter which has been calibrated by a primary standard.

#### B. Daily Perimeter Air Monitoring

Perimeter Air Monitoring was conducted on a daily basis. Perimeter samples were collected upwind from the days planned abatement work. In addition, samples were collected within the Support Zone of the project. Additional perimeter samples were collected downwind as close to the day's work area as possible. The exact location of the perimeter sampling was determined daily based on wind direction and planned abatement activities.

All perimeter sampling was conducted using 25 millimeter mixed cellulose ester cassettes (MCE) with a pore size of 0.8 micrometers. Samples were analyzed using the NIOSH Method 7400 Phase Contrast Microscopy (PCM) techniques.

Any PCM result greater than 0.005 fibers per square centimeter was further analyzed using NIOSH Method 7402. The NIOSH 7400 Method uses a transmission electron microscope (TEM) for the specific determination of asbestos fibers and bundles. The NIOSH 7402 method uses the fiber counting rules of the NIOSH 7400 PCM method (PCMe), therefore a more direct correlation can be made between the two methods.

All perimeter air monitoring results were less than 0.005 fibers per cubic centimeter of air

Cleveland Trencher Page



#### C. Daily Personal Air Monitoring

RCS Environmental conducted personal air monitoring of the abatement contractor's personnel. Samples were conducted on approximately 25% of the contractor's workforce. Personal samples were collected using calibrated low flow pumps. Samples were analyzed using the NIOSH 7400 PCM method. Samples were collected in a manner consistent with OSHA regulations for determining a Permissible Exposure Limit (PEL) and a 30-minute excursion limit.

All personal air monitoring results were below the OSHA PEL of 0 10 f/cc.

#### D. Final Clearance Evaluation

All work areas were visual inspected by an ODH certified Asbestos Hazard Evaluation Specialist. The inspection was thorough and complete as to identify any remaining asbestos dust or debris.

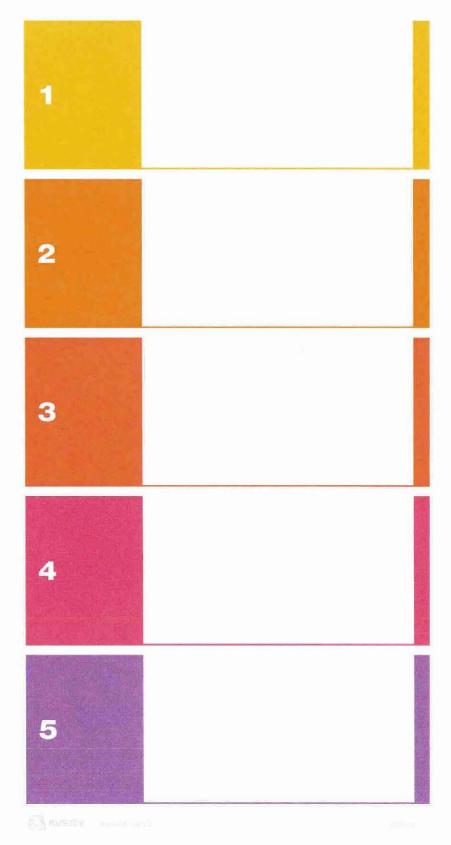
At the completion of the final visual inspection, the abatement activities for that work area was deemed complete.

#### IV. Comments and Follow-up Action

All specified asbestos contaminated materials were removed and all work conformed to the work plan.

Based on the field notes, visual inspections, observations of work practices, inspection of work areas and air sample results, it is RCS Environmental's opinion that the project was conducted in compliance with regulatory and industry standards.

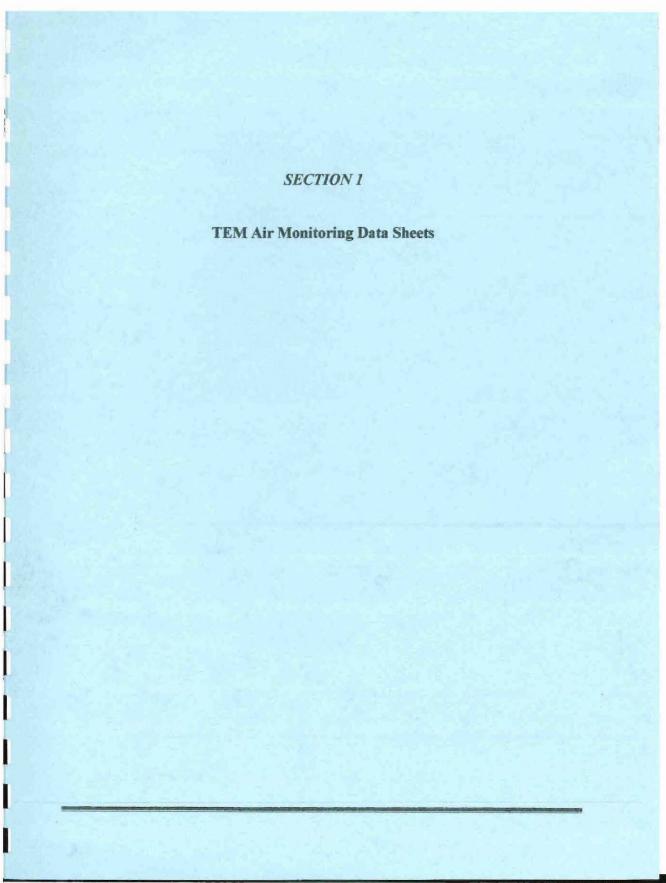
age 4



JLLP-PRECISION000233

EAB CERCLA 106(b) 12-01 001469

1





## **CERTIFICATE OF ANALYSIS**

Client:

RCS Environmental Group

2812 Shakercrest Blvd

Beachwood

OH 44122 Report Date:

9/21/2011

Project:

Cleveland Trencher

Project No.:

#### TEM AIR SAMPLE ANALYSIS SUMMARY

Lab No.	Client No.	Location	Volume	Result	Asbestos Types
 4429701A	01A/01B	WestSideOfProperty SouthPastEndOfBldg. 082311/082411	1576 Liters	<11.0 Fibers/mm² <0.0027 Fibers/cc	None Detected
 4429702A	02A/02B	WestSideOfProperty @WestSideGate 082311/082411	1572 Liters	<11.0 Fibers/mm² <0.0027 Fibers/cc	None Detected
 4429703A	03A/03B	SouthwestCorner OfProperty 082311/082411	1566 Liters	<11.0 Fibers/mm² <0.0027 Fibers/cc	None Detected
4429704A	04A/04B	South Center Of Property 082311/082411	1562 Liters	<11.0 Fibers/mm² <0.0027 Fibers/cc	None Detected
 4429705A	05A/05B	East Side East Of Property 082311/082411	1554 Liters	11.0 Fibers/mm² 0.0027 Fibers/cc	Chrysotile
4429706A	06A/06B	North End Inside Decon Area 082311/082411	1552 Liters	<11.0 Fibers/mm² <0.0027 Fibers/cc	None Detected

NIST-NVLAP No. 101165-0

AIHA Lab No. 100188

NYS-DOH No. 11021

Methodology: NIOSH 7402

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any agency of the U.S. government.

IATL assumes that all sampling methods and data upon which these results are based have been occurately supplied by the client.

Method requires submittal of blanks for analysis. Detection Limit (Reporting Limit) is dependent upon the volume of air sampled. NIOSH guidelines recommend a minimum of 400 L (0.0074 f/cc).

These results are not blank corrected.

Analysis Performed By: \_C. Liska

Date: 9/21/2011

Page 1 of 2

Approved By:

JLLP-PRECISION000236



CERTIFIC	ATE	$\mathbf{OF}$	ANA	A T	YSIS
CERTIFIC		$\mathbf{v}$			

Client:

RCS Environmental Group

2812 Shakercrest Blvd

Beachwood

OH 44122

Report Date:

9/21/2011

Cleveland Trencher

Project:
Project No.:

#### TEM AIR SAMPLE ANALYSIS SUMMARY

<u>Lab No.</u> <u>Client No.</u>

Location

<u>Volume</u>

Result

Asbestos Types

4429707A

07A/07B

Field Blank 082311/082411 NA Liters

<11.0 Fibers/mm²
NA Fibers/cc

None Detected

NIST-NVLAP No. 101165-0

AIHA Lab No. 100188

NYS-DOH No. 11021

Methodology: NIOSH 7402

This confidential report relaies only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any agency of the U.S. government.

1ATL assumes that all sampling methods and data upon which these results are based have been accurately supplied by the client.

Method requires submittal of blanks for analysis. Detection Limit (Reporting Limit) is dependent upon the volume of air sampled. NIOSH guidelines recommend a minimum of 400 L (0.0074 f/cc).

These results are not blank corrected.

Analysis Performed By:	C. Liska
------------------------	----------

Date: 9/21/2011

Page 2 of 2

JLLP-PRECISION000237

## Transmission Electron Microscopy - Sample Data

Client: RCS Environmental Group

2812 Shakercrest Blvd

Beachwood

OН

44122

Report Date: Project:

9/21/2011

Cleveland Trencher

Project No.:

IATL No.: Client Sample No.: 4429701A

01A/01B

Description/Location:

WestSideOfProperty SouthPastEndOfBldg.

082311/082411

Volume: Filter Type:

Filter Size: Pore Size:

1576 Liters MCE

385 mm<sup>2</sup> 0.80 µm

ANALYSIS RESULTS:

Grid Openings: Opening Area:

Area Analyzed: Sensitivity: Detection Limit:

11.0 Fibers/mm<sup>2</sup>

ASBESTOS FIBERS:

>=0.5µm to <5.0µm;

>=5.0µm: Fibers/Area: Concentration:

Types Identified: Type 2:

Type 3:

NON-ASBESTOS FIBERS:

Fibers/Area: Concentration:

Types Identified: Type 2:

Type 3: Type 4:

Micrograph Number: X-Ray Spectrum Number:

0.013 mm<sup>2</sup> 0.091 mm<sup>2</sup>

0.0027 Fibers/cc

None Detected

None Detected None Detected <11.0 Fibers/mm²

<0.0027 Fibers/cc None Detected

None Detected

<11.0 Fibers/mm² <0.0027 Fibers/cc None Detected

#### Methodology: NIOSH 7402

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any agency of the U.S. government.				
IATL assumes that all sampling methods and data upon which these results are based have been accurately supplied by the client.				
Method requires submittal of blanks for analysis. Detection Limit (Reporting Limit) is dependent upon the volume of air sampled. NIOSH guidelines recommend a minimum of 400 L. (0.	1.0074 f/cc			
These results are not blank corrected.				

Analysis Perfomed By:		C. Liska
Date:	9/21/2011	

Page 1 of 7

## Transmission Electron Microscopy - Sample Data

Client: RCS Environmental Group

2812 Shakercrest Blvd

Beachwood

OH

44122

Report Date:

9/21/2011

Project:

Cleveland Trencher

Project No.:

IATL No.: Client Sample No.: 4429702A

02A/02B

Description/ Location:

WestSideOfProperty

@WestSideGate

082311/082411

Volume: Filter Type:

Filter Size: Pore Size: 1572 Liters MCE 385 mm<sup>2</sup>

0.80 µm

ANALYSIS RESULTS:

Grid Openings: Opening Area:

Area Analyzed:

Sensitivity: Detection Limit: 7

0.091 mm<sup>2</sup> 11.0 Fibers/mm<sup>2</sup>

ASBESTOS FIBERS:

>=0.5µm to <5.0µm:

>=5.0µm: Fibers/Area: Concentration:

Types Identified:

Type 2: Type 3:

NON-ASBESTOS FIBERS:

Fibers/Area: Concentration: Types Identified:

Type 2: Type 3: Type 4:

Micrograph Number: X-Ray Spectrum Number: 7

0.013 mm² 0.091 mm²

0.0027 Fibers/cc

None Detected None Detected

None Detected
<11.0 Fibers/mm²

<0.0027 Fibers/cc None Detected

None Detected <11.0 Fibers/mm² <0.0027 Fibers/cc None Detected

Methodology: NIOSH 7402

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any agency of the U.S. government.

IATL assumes that all sampling methods and data upon which these results are based have been accurately supplied by the client.

Method requires submittal of blanks for analysis. Detection Limit (Reporting Limit) is dependent upon the volume of air sampled. NIOSH guidelines recommend a minimum of 400 L (0.0074 floc).

These results are not blank corrected.

Analysis Perfomed By:	C. Liska		

Date:

9/21/2011

Page 2 of 7

JLLP-PRECISION000239

#### Transmission Electron Microscopy - Sample Data 9/21/2011 Client: RCS Environmental Group Report Date: 2812 Shakercrest Blvd Cleveland Trencher Project: Beachwood 44122 Project No.: IATL No.: 4429703A Description/ Location: SouthwestCorner OfProperty 03A/03B Client Sample No.: 082311/082411 Volume: 1566 Liters Filter Type: MCE Filter Size: 385 mm<sup>2</sup> 0.80 µm Pore Size: ANALYSIS RESULTS: Grid Openings: Opening Area: 0.013 mm<sup>2</sup> 0.091 mm<sup>2</sup> Area Analyzed: Sensitivity: 11.0 Fibers/mm<sup>2</sup> Detection Limit: 0.0027 Fibers/cc ASBESTOS FIBERS: None Detected >=0.5μm to <5.0μm; None Detected >=5.0µm: None Detected Fibers/Area: <11.0 Fibers/mm² Concentration: <0.0027 Fibers/cc Types Identified: None Detected Type 2: Type 3: NON-ASBESTOS FIBERS: None Detected <11.0 Fibers/mm² Fibers/Area: <0.0027 Fibers/cc Concentration: Types Identified: None Detected Type 2: Type 3: Type 4: Micrograph Number: X-Ray Spectrum Number:

### Methodology: NIOSH 7402

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any agency of the U.S. government.	
IATL assumes that all sampling methods and data upon which these results are based have been accurately supplied by the client.	
Method requires submittal of blanks for analysts. Detection Limit (Reporting Limit) is dependent upon the volume of air sampled. NIOSH guidelines recommend a minimum of 400 L. (0.0074	4 //cc
These results are not blank corrected.	

Analysis Perfomed By:		C. Liska	
Date:	9/21/2011		

Page 3 of 7

lient: RCS Environ	=	Report Date: 9/21/2	
2812 Shaker Beachwood	OH 44122	Project: Clevel Project No.:	and Trencher
ATL No.:	4429704A	Description/ Location:	South Center
ient Sample No.:	04A/04B		Of Property 082311/08241
	Volume:	1562 Liters	
	Filter Type:	MCE	
	Filter Size:	385 mm²	
	Pore Size:	0. <b>80</b> μm	
	ANALYSIS RESULTS:		
	Grid Openings:	7	
	Opening Area:	0.013 mm <sup>2</sup>	
	Area Analyzed:	0.091 mm <sup>2</sup>	
	Sensitivity:	11.0 Fibers/mm²	
	Detection Limit:	0.0027 Fibers/cc	
	ASBESTOS FIBERS;	None Detected	
	>=0.5µm to <5.0µm:	None Detected	
	>=5.0µm:	None Detected	
	Fibers/Area:	<11.0 Fibers/mm²	
	Concentration:	<0.0027 Fibers/cc	
	Types Identified:	None Detected	
	Type 2:		
	Type 3:		
	NON-ASBESTOS FIBERS:	None Detected	
	Fibers/Area:	<11.0 Fibers/mm²	
	Concentration:	<0.0027 Fibers/cc	
	Types Identified:	None Detected	
	Type 2:		
	Type 3:		
	Type 4:		
	Micrograph Number:		
	X-Ray Spectrum Number:		

## Methodology: NIOSH 7402

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any agency of the U.S. government.	
IATL assumes that all sampling methods and data upon which these results are based have been accurately supplied by the client	
Method requires submittal of blanks for analysis. Detection Limit (Reporting Limit) is dependent upon the volume of air sampled. NIOSH guidelines recommend a minimum of 400 L (0.007-	74 f/ce
These results are not blank corrected.	

Analysis	Perfomed By:	C. Liska
Date:	9/21/2011	

Page 4 of 7

## Transmission Electron Microscopy - Sample Data

Client: RCS Environmental Group

2812 Shakercrest Blvd

Beachwood

OH

Report Date: Project:

.C.

Cleveland Trencher

9/21/2011

Project No.:

IATL No.:

**IATL** 

4429705A

Description/ Location:

East Side East Of Property

082311/082411

44122

Client Sample No.:

05A/05B

Volume: Filter Type:

Filter Size:

Pore Size:

1554 Liters MCE

385 mm²

0.80 µm

ANALYSIS RESULTS:

Grid Openings:

Opening Area: Area Analyzed: Sensitivity:

Detection Limit:

0.013 mm²

0.091 mm<sup>2</sup> 11.0 Fibers/mm<sup>2</sup> 0.0027 Fibers/cc

ASBESTOS FIBERS: >=0.5μm to <5.0μm:

>=0.5μm to <5.0μm >=5.0μm:

Fibers/Area:
Concentration:
Types Identified:

11.0 Fibers/mm<sup>2</sup> 0.0027 Fibers/cc Chrysotile

None Detected

Type 2:

Туре 3:

NON-ASBESTOS FIBERS:

Fibers/Area:
Concentration:
Types Identified:

None Detected <11.0 Fibers/mm² <0.0027 Fibers/cc None Detected

Type 2: Type 3:

Type 4:

Micrograph Number: X-Ray Spectrum Number:

#### Methodology: NIOSH 7402

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any agency of the U.S. government.	
IATL assumes that all sampling methods and data upon which these results are based have been accurately supplied by the client.	
Method requires submittal of blanks for analysis. Detection Limit (Reporting Limit) is dependent upon the volume of air sampled. NIOSH guidelines recommend a minimum of 400 L.	(0.0074 f/cc,
These results are not blank corrected.	

Analysis P	erfomed By:	C. Liska	
Date:	9/21/2011		

Page 5 of 7

Client:	RCS Environ	nmental Group	Re	port Date:	9/21/2011		
	2812 Shaker			Project: Project No.:	Cleveland Trencher		
	Beachwood	OH 44122			o.o.oimid		
IATL!	No.:	4429706A	De	scription/ Lo	cation:	North End Inside	
Client S	ample No.:	06A/06B				Decon Area 082311/082411	
		Volume;	1552 Liters				
		Filter Type:	MCE				
		Filter Size:	385 mm²				
		Pore Size:	0.80 μm				
		ANALYSIS RESULTS:					
		Grid Openings:	7				
		Opening Area:	$0.013 \text{ mm}^2$				
		Area Analyzed:	0.091 mm²				
		Sensitivity:	11.0 Fibers/mm <sup>2</sup>				
		Detection Limit:	0.0027 Fibers/cc				
		ASBESTOS FIBERS:	None Detected				
		>=0.5μm to <5.0μm;	None Detected				
		>=5.0μm:	None Detected				
		Fibers/Area:	<11.0 Fibers/mm²				
		Concentration:	<0.0027 Fibers/cc				
		Types Identified:	None Detected				
		Type 2;					
		Type 3:					
		NON-ASBESTOS FIBERS:	None Detected				
		Fibers/Area:	<11.0 Fibers/mm²				
		Concentration:	<0.0027 Fibers/cc				
		Types Identified:	None Detected				
		Type 2:					
		Type 3:					
		Type 4:					
		Micrograph Number:					
		X-Ray Spectrum Number:					
		Metl	hodology: NIOS				

Analysis Perfomed By: \_C. Liska Date: 9/21/2011

Page 6 of 7

	1 ransmission Ele	ctron Microscopy - S	amp	ie Data
Client: RCS Enviro	nmental Group	Report Date:	9/21/20	11
2812 Shaker	rcrest Blvd	Project:	Clevela	nd Trencher
Beachwood	OH 44122	Project No.:		
IATL No.:	4429707A	Description/ Loca	ition:	Field Blank
Client Sample No.:	07A/07B			082311/082411
	Volume:	NA Liters		
	Filter Type:	MCE		
	Filter Size:	385 mm²		
	Pore Size:	0.80 µm		
	ANALYSIS RESULTS:			
	Grid Openings:	7		
	Opening Area:	0.013 mm <sup>2</sup>		
	Area Analyzed:	0.091 mm <sup>2</sup>		
	Sensitivity:	11.0 Fibers/mm²		
	Detection Limit:	NA Fibers/cc		
	ASBESTOS FIBERS:	None Detected		
	>=0.5µm to <5.0µm:	None Detected		
	>=5.0μm:	None Detected		
	Fibers/Area:	<11.0 Fibers/mm²		
	Concentration:	NA Fibers/cc		
	Types Identified:	None Detected		
	Type 2:			
	Type 3:			
	NON-ASBESTOS FIBERS:	None Detected		
	Fibers/Area:	<11.0 Fibers/mm²		
	Concentration:	NA Fibers/cc		
	Types Identified:	None Detected		
	Type 2:			
	Type 3:			
	Type 4:			

#### Methodology: NIOSH 7402

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any agency of the U.S. government.

IATL assumes that all sampling methods and data upon which these results are based have been accurately supplied by the client.

Method requires submittal of blanks for analysis. Detection Limit (Reporting Limit) is dependent upon the volume of air sampled. NIOSH guidelines recommend a minimum of 400 L (0.0074 fcc).

These results are not blank corrected.

Analysis	Perfomed By:	C. Liska	<del></del>
Date:	9/21/2011		Page 7 of 7

Micrograph Number: X-Ray Spectrum Number:



9000 Commerce Parkway, Suite B • Mount Laurel, NJ 08054 Phone: 877-428-4285/856-231-9449 • Fax: 856-231-9818

# **Chain of Custody**

-Airborne Asbestos -

Contact Information  Client Company: RCS ENVIRONMENTAL Project Num  Office Address: 2012 SHAKELCEST Project Nu  City, State, Zip: BEACHWOOD, OH WIZ Primary Con  Fax Number: Office Ph  RCSENJICONMENTA RMSN. COM.	tact: MIKE SCHMIOT  NON: 216-378-0997
Analysis/Instructions:  PCM TEM - NICSH THOZ  PLM Other  Method (specify): PLEASE USE METHOD 7400 AN Special Instructions:	
Turnaround Time  Preliminary Results Requested Date:  Specific date / time  10 Day 5 Day 3 Day 2 Day 1 Day* 12 Hour*  Note: Viable/Culturable samples may require several days in order to establish countable contable con	olony forming units (CFU) of fungi.
Chain of Custody Relinquished (Name/Organization): Date: 9/6 Received (Name / IATL): Date: Sample Login (Name / IATL): Date: Analysis(Name(s) / IATL): Date: 9.2 QA/QC Review (Name / IATL): Date: 4.2 Archived / Released: QA/QC InterLAB Ule: Date: 4.2	Times 2011

Celebrating 25 years...one sample at a time www.fatl.com

-1-





# Sample Log

-Airborne Asbestos -

Client:	RCS ENVIRONMENTAL	Project:_	CLEUELAND TRENCHER
Sampling Date:	8/23-24/4	r	

Client Sample #	· iATL#	Location/ Description	Flow Rate	<u>Start</u> End	Sampling time (min)	Area (ft3) Volume (L)	Results
082311-01B	4429701					1574	
1082411-02B	4429702					1572	
002411-038	4429703					1546	
082411-04B	4429704					1502	
082411-05B	4429705			-		1554	
082411-06B	4429706					1552	
082411-078 082311-07A	4429707	BLANK					_
		ļ				-	- · · · ·
		<del> </del>					
	•	<del> </del>		-			
		<del> </del>			}		<del></del> -
			<u></u>	<del></del>			·

Celebrating 25 years...one sample at a time www.iatl.com

- 2 -

<sup>\* =</sup> Insufficient Sample Provided to Perform QC Reanalysis (<200mg)

\*\* = Insufficient Sample Provided to Analyze (<50mg)

\*\* = Insufficient Sample Provided to Analyze (<50mg)

\*\*\* = Matrix / Substrate Interference Possible

FB = Method Requires the submittal of blank(s). ML = Multi Layered Sample. May result in inconsistent results.

These preliminary results are issued by iATL to expedite procedures by clients based upon the above data. iATL assumes that all of the sampling methods and data upon which these results are based, has been accurately supplied by the client. These results may not have been reviewed by the Laboratory Director.

Final Certificate of Analysis will follow these preliminary results. The signed COA is to be considered the official results. All EPA, HUD, and NIDEP conditions apply.



SMGT.BatchSMR.0207

# BATCH / SAMPLE MANAGEMENT REPORT

ustomer No.:	RCS486			Batch Nur	iber:	25248
		mental Group		Pro	ject: (	Cleveland Trench
	2812 Shakero Beachwood	rest Biva OH	44122	Project Nun	ıber:	
				•	ΓAT:	3 D:
ustomer Rep:	SC			Property and the second		3.07
				Date/Time R	ec'd:	9/16/201
of Samples:	7	Analysis:	TEM NIOSH	Time/Date	Due:	9/21/201
nitials Signalin Acknowledgem		]RTP:	To PLM	NOB	To TEM NO	DB
pecial Instructio	ns:					
dmin Notes:	rese	environmental@	@msn.com			
Shin	ping Error:					
-				l Abl- b	ed.	
Sami	oles were not	receivea in a se	ealed container. Bilk s	amnies not double bagg		
			ealed container. Bulk s			
Air (	Cassettes rece	ived open in ba		empromised, possible co		
Air (	Cassettes rece ples received	ived open in ba wet.	ng sample integrity co	ompromised, possible co		
Air C	Cassettes rece ples received ples received	ived open in ba wet. covered with de	ng sample integrity courst possible cross co	empromised, possible contamination.		
Air C Samj Samj Samj	Cassettes rece ples received ples received ple containers	ived open in ba wet. covered with de damaged, cont	g sample integrity coust possible cross contents spilled possible	empromised, possible contamination.  cross contamination.		
Air C Samj Samj Samp	Cassettes rece ples received ples received ple containers prwork receive	ived open in ba wet. covered with do damaged, cont ed in the same h	ig sample integrity countries possible cross contents spilled possible bag as samples possible	empromised, possible contamination.  cross contamination.		
Air ( Samj Samj Pape No /	Cassettes receiples received ples received ple containers erwork received Incomplete C	ived open in ba wet. covered with do damaged, cont ed in the same b Chain of Custod	ust possible cross contents spilled possible bag as samples possible by Received.	empromised, possible contamination.  cross contamination.		
Air C Samj Samj Pape No / No /	Cassettes receiples received ples received ple containers erwork received Incomplete S	ived open in ba wet. covered with do damaged, cont ed in the same he chain of Custod ample Log Rec	ust possible cross contents spilled possible bag as samples possible by Received.	empromised, possible contamination.  cross contamination.  contamination.		
Air C Samj Samj Pape No / No / Samj Samj Samj No / Samj No / No / Samj Samj No / No / No / No / No / No /	Cassettes receiples received ples received ple containers rwork received Incomplete Sple container	ived open in batwet.  covered with de damaged, conted in the same became of Custod ample Log ReculDs do not mate	ust possible cross contents spilled possible bag as samples possible by Received.	empromised, possible contamination.  cross contamination.  contamination.		
Air C Samp Samp Pape No / No / Samp No 1	Cassettes receiples received ples received ple containers rwork received Incomplete Signature of Curnaround Timaround Timaroun	ived open in bat wet. covered with distanged, conted in the same be chain of Custod ample Log Rec IDs do not mat- time indicated.	ust possible cross contents spilled possible bag as samples possible by Received.  ceived.  ch the client's sample le	empromised, possible contamination.  cross contamination.  contamination.	ontamination.	d.
Air C Samp Samp Pape No / Samp No T No T PCM	Cassettes received ples received ples received ple containers rework received Incomplete Concomplete Sple container Furnaround Tif Re-prep for	ived open in batwet. covered with distanged, conted in the same becample Log Reculbs do not matime indicated. TEM NIOSH 7	ust possible cross contents spilled possible bag as samples possible by Received. ceived. ch the client's sample left.	empromised, possible contamination.  cross contamination.  contamination.	ontamination.	d.
Air C Samj Samj Pape No / Samj No T No T PCM Blan	Cassettes received ples received ples received ple containers between the complete Concomplete Some container furnaround To Re-prep for tak(s) not subtractived.	ived open in bat wet. covered with distanced in the same be chain of Custod ample Log Rec IDs do not mat- time indicated. TEM NIOSH 7 uitted as require	ust possible cross contents spilled possible bag as samples possible by Received. ceived. ch the client's sample be 7402. Cassettes previous by the requested analysis.	ompromised, possible contamination. cross contamination. contamination.  og. usly opened and portion ytical method.	ontamination.	d.
Air C Samj Samj Pape No / Samj No T No T PCM Blan	Cassettes received ples received ples received ple containers between the complete Concomplete Sple container Furnaround Till Re-prep for the container shippin imum shippin	ived open in bat wet. covered with distanced in the same be chain of Custod ample Log Rec IDs do not mat- time indicated. TEM NIOSH 7 uitted as require	ust possible cross contents spilled possible bag as samples possible by Received. ceived. ch the client's sample left.	ompromised, possible contamination. cross contamination. contamination.  og. usly opened and portion ytical method.	ontamination.	d.
Air C Sam Sam Sam Pape No / No / Sam No I PCM Blan Mini Other	Cassettes received ples received ples received ple containers between the complete Concomplete Sple container Furnaround Till Re-prep for the container shippin imum shippin	ived open in bat wet. covered with distanced in the same be chain of Custod ample Log Rec IDs do not mat- time indicated. TEM NIOSH 7 uitted as require	ust possible cross contents spilled possible bag as samples possible by Received. ceived. ch the client's sample be 7402. Cassettes previous by the requested analysis.	ompromised, possible contamination. cross contamination. contamination.  og. usly opened and portion ytical method.	ontamination.	d.
Air C   Samp   Samp   Samp   Pape   No / No / Samp   No T   PCM   Blan   Mini   Othe   Bate   Bate	Cassettes receiples received ples received ples received ple containers by Carlon Ples Car	ived open in batwet.  covered with did damaged, content of Custod ample Log Reculos do not matrime indicated.  TEM NIOSH 7 atted as required grequirements	ust possible cross contents spilled possible bag as samples possible by Received. ceived. ch the client's sample be 7402. Cassettes previous by the requested analysis.	ompromised, possible contamination.  cross contamination.  contamination.  og.  usly opened and portion ytical method.  hed Carrier Air Bill.	ontamination.	
Air C   Samp   Samp   Samp   Samp   Pape   No / No / Samp   No T   PCM   Blan   Mini   Othe   Bate   Wro	Cassettes receiples received ples received ple containers rwork received Incomplete Container Furnaround Till Re-prep for ak(s) not subminum shippiner:	ived open in ba wet. covered with de damaged, cont d in the same h chain of Custod ample Log Rec IDs do not mat- time indicated. TEM NIOSH 7 hitted as require g requirements  Listed:	ust possible cross contents spilled possible bag as samples possible by Received. ceived. ch the client's sample be 7402. Cassettes previous by the requested analysis.	ompromised, possible contamination.  cross contamination.  contamination.  og.  usly opened and portion ytical method.  hed Carrier Air Bill.  Login I	ontamination.  of filter remove	ncorrectly:
Air C   Samp   Samp   Samp   Samp   Pape   No / No / No / Samp   No T   PCM   Blan   Mini   Othe   Bate   Wro   Samp   Sa	Cassettes receiples received ples received ple containers received. Incomplete Concomplete Sple container furnaround Till Re-prep for ak(s) not subminum shippiner:  Check Error:  Check Client ID and Client Locong Project ID	ived open in ba wet. covered with de damaged, cont d in the same h Chain of Custod ample Log Rec IDs do not mat- time indicated. TEM NIOSH 7 hitted as require g requirements  Listed: cation Listed:	ust possible cross contents spilled possible bag as samples possible by Received. ceived. ch the client's sample left 7402. Cassettes previous by the requested analy not attained. See attack	ompromised, possible contamination.  cross contamination.  contamination.  og.  usly opened and portion ytical method.  hed Carrier Air Bill.  Login I  Sample  Sample  Duplica	of filter remove  Error:  Log Stamped i  Containers Misate / Extra Sampi	ncorrectly: labelled: les Not Stamped:
Air C   Samp   Samp   Samp   Samp   Pape   No / No / No / Samp   No T   PCM   Blan   Mini   Othe   Bate   Wro	Cassettes receiples received ples received ples received ple containers received. Incomplete Concomplete Sple container furnaround Til Re-prep for ak(s) not subminum shippiner:  Check Error:  Check Client ID and Client Locong Project ID and TurnAround Tiles and Client Locong Project ID and TurnAround Tiles and Client Locong Project ID and TurnAround TurnAround Pless received the content of the content ID and TurnAround TurnAr	ived open in ba wet. covered with de damaged, cont d in the same h Chain of Custod ample Log Rec IDs do not mat- time indicated. TEM NIOSH 7 hitted as require g requirements  Listed: cation Listed: d Time Listed	ust possible cross contents spilled possible bag as samples possible by Received. ceived. ch the client's sample left 7402. Cassettes previous by the requested analy not attained. See attack	ompromised, possible contamination.  cross contamination.  contamination.  og.  usly opened and portion ytical method.  hed Carrier Air Bill.  Login I  Sample  Sample  Duplica	of filter remove  Error:  Log Stamped i Containers Mis.	ncorrectly: labelled: les Not Stamped:
Air C   Samp   Samp   Samp   Samp   Pape   No / No / No / Samp   No T   PCM   Blan   Mini   Othe   Bate   Wro	Cassettes receiples received ples received ples received ple containers received. Incomplete Concomplete Sple container furnaround Time. The sple container for the splend of	ived open in ba wet. covered with de damaged, cont ed in the same h Chain of Custod ample Log Rec IDs do not mat- time indicated. TEM NIOSH 7 hitted as require g requirements  Listed: cation Listed: Listed: nd Time Listed Listed:	ust possible cross contents spilled possible bag as samples possible by Received. ceived. che the client's sample left by the requested analytic not attained. See attactions of the client's sample left by the requested analytic attained. See attactions of the client's sample left by the requested analytic attained. See attactions of the client's sample left by the requested analytic attained.	ompromised, possible contamination.  cross contamination.  contamination.  og.  usly opened and portion ytical method.  hed Carrier Air Bill.  Login I  Sample  Sample  Duplica	of filter remove  Error:  Log Stamped i  Containers Misate / Extra Sampi	ncorrectly: labelled: les Not Stamped:
Air C   Samp   Samp   Samp   Samp   Samp   Pape   No / No / No / Samp   No T   PCM   Blan   Mini   Othe   Bate   Wro	Cassettes receiples received ples received ples received ple containers received. Incomplete Concomplete Sple container furnaround Time. The container furnaround Time.	ived open in ba wet. covered with de damaged, cont de in the same h Chain of Custod ample Log Rec IDs do not mate ime indicated. TEM NIOSH 7 hitted as require g requirements Listed: cation Listed: disted: cation Listed: cation List	ust possible cross contents spilled possible bag as samples possible by Received. ceived. che the client's sample left by the requested analytic not attained. See attactions of the client's sample left by the requested analytic attained. See attactions of the client's sample left by the requested analytic attained. See attactions of the client's sample left by the requested analytic attained.	ompromised, possible contamination.  cross contamination.  contamination.  og.  usly opened and portion ytical method.  hed Carrier Air Bill.  Login I  Sample  Sample  Duplica	of filter remove  Error:  Log Stamped i  Containers Misate / Extra Sampi	ncorrectly: labelled: les Not Stamped:
Air C   Samp	Cassettes receiples received ples received ples received ples received ples received ples received. Incomplete Concomplete Sple container Furnaround Tid Re-prep for ink(s) not submitted by the Error:  In Client ID ong Client Locong Project ID ong TurnAround TurnAround Tid Re-prep for ink(s) not submitted by the Error:  In Client ID ong Client Locong Project ID ong TurnAround TurnAround Due Date ong Date/Time ong Analysis Manalysis M	ived open in ba wet. covered with de damaged, cont ed in the same h Chain of Custod ample Log Rec IDs do not mat- time indicated. TEM NIOSH 7 hitted as require g requirements  Listed: cation Listed: Listed: nd Time Listed Listed:	ust possible cross contents spilled possible bag as samples possible by Received. ceived. che the client's sample left 7402. Cassettes previously the requested analymot attained. See attacked:	ompromised, possible contamination.  cross contamination.  contamination.  og.  usly opened and portion ytical method.  hed Carrier Air Bill.  Login I  Sample  Sample  Duplica	of filter remove  Error:  Log Stamped i  Containers Misate / Extra Sampi	ncorrectly: labelled: les Not Stamped:

JLLP-PRECISION000247

Copy: FE, JN, RS, 5

•
_
늗
_
_
П
두
_
U
<u> </u>
п
PRE
ш
111
$\overline{}$
ľì
` '
==
$^{\prime}$
않
0
u
$\sim$
~
ON0002
$\overline{}$
$\overline{}$
$\overline{}$
${}$
$\overline{}$
$\sim$
V )
$\frac{3}{2}$
₹
_

RCS Environmental Group

# ASBESTOS AIR MONITORING REPORT

Date	8/23/2011
Client	
Project	
Project No	

			DESCRIPTIVE INFO	RMATION	Anelytical Method		
SAMPLE I.D.	SAMPLE TYPE	WORKERS NAME	SOCIAL SECURITY #	LOCATION	ACTIVITY	RESPIRATOR TYPE	
082311-01A	BED			Westside of Property South past	end of Buildin	+	
082311-02A	86D			Westside of Property @ Westsid	e Gate		
082311-03 A	BGP			Southwest corner of Property			
082311-04 A	BGD			South center of Property			
082311-05A	BGP			Eastside East of Property			
082811-06A	BGD			Northend inside Decon Area			
082511-07 A	FB			Field Blank			
	<u></u>	·				ļ	
				<u></u>		<u> </u>	
				1		<u> </u>	
						<u> </u>	
		·					

### ANALYTICAL INFORMATION

SAMPLE I.D.	PUMP #	CALIB.	FLOW RATE	(L/min)	RU	INNING TIME	(min)	VOLUME	UME FIBERS/ iere) FIELOS	PI語配合() のm <sup>t</sup> (Blank Corr)	LOG	FIBER/om*
OAMPLE I.D.	FUNIF #	BEGINNING	END	AVERAGE	START	STOP	DURATION	(Litere)			PIBERS/ om²	(Blank Corr)
0823H - 01A	20	2.0	2.0	2.0	6808	1449	401	802				
082311-02A	76	2.0	2.0	2.0	0810	1452	402	904				
082311-03A	49	2.0	2.0	2.0	08/3	1455	402	804				
082311-04A	99	2.0	2,0	2.0	0819	1458	399	798				
082311-05A	87	2.0	2.0	2.0	0814	1500	396	792				
082311-06 A	54	2.0	2.0	2.0	0832	1506	394	788				I
082311-07A	NA	NA	NA		NA							
		· ·	<del></del>									
		1				•						

		KEY TO ABBREVIATIONS		Comments	
SAMPLE	TYPE	ACTIVITY	RESPIRATOR		
RS = personal EX = hepa exhaust B = field blank	FC = final clearance BXC = excursion IWA = inside work gree	REM = removal CLN = olean-up GLSG = glovebag We.O = waste load-out	HM w helf mask FF = tull face P = powered APR = air purifying resp.	Sampled by	Date 8/23/201

_
$\Box$
T
工
ס
ᄁ
m
$\ddot{\sim}$
$\underline{v}$
ഗ
=
O
ž
$\overline{}$
$\approx$
$\approx$
$\ddot{\sim}$
4
Ö



# ASBESTOS AIR MONITORING REPORT

Date	8/24/2011	<b>B</b>
Client		
Project		
Project No	),	
Analytical	Method	

			DESCRIPTIVE INFO	RMATION	Analytical Method		
SAMPLE I.D.	SAMPLE TYPE	Workers name	SOCIAL SECURITY #	LOCATION	ACTIVITY	RESPIRATOR TYPE	
82411 - 01B	BGD			Westside of Property Southpastend	of Bulds.		
082411-028	AGD			Westsides & Property e Westside Gate			
092411-033	BGD			Southwest Corner of Property			
082411-04B	BGP			South Center of Property			
082411-05B	ପଃଞ			Eastside East of Property		<u> </u>	
082411-068	Bad			North endinside Decon Aren			
082411-07B	FB			Field Black			
						<del></del>	
			<u>                                     </u>			<del> </del>	
	<u> </u>	<del> </del>	<u> </u>				
			<u> </u>			ļ <u>.</u>	
				1		1	

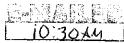
#### **ANALYTICAL INFORMATION**

					INCHI IIA		4411 11 14 14					
SAMPLE I.D.	PUMP#	CALIB.	FLOW RATE	(L/min)	RU	inning time	(min)	VOLUME	FIBERS/	FIBERS/	LOQ FIBERS/	PIBER/om
	runir w	BEGINNING	END	AVERAGE	BTART	STOP	DURATION	(Liters)	FIELDS	(Slank Con)	om!	(Blank Gorr)
082411-01B	20	7.0	2,0	2.0	0825	1452	.387	774				
082411-023	79	2.0	2,0	2.0	08420	1454	384	768				
082411-03B	49	2.0	2.0	2.0	0814	1435	38/	742				
082411-048	99	2.0	200	2.0	0939	1501	382	764				
08241-053	87	2.0	2.0	2.0	0842	1504	344	762				
082411-068	54	2.0	2.0	2.0	0850	1512	382	764			:	
082411-073	NA	NA	<b>がみ</b>	NA	ИA	NΑ						
	<del></del>					<u> </u>						
			2								·	

		KEY TO ABBREVIATIONS		Comments
SAMPLE	TYPE	ACTIVITY	RESPIRATOR	
PRS = personal IEX = hepe exhaust PB = field blank	FC = final charance EXC = excursion IWA = Inside work area		HM = half mask FF = full lace P = powered APS = set curliving resp	Sampled by



# PRELIMINARY RESULTS Airborne Asbestos Analysis TEM NIOSH



Client:	RCS Environment 2812 Shakercress Beachwood C RCS486		- -	Project: Project No.: PCM Reprep(y/n) Turn-Around Time		ncher 9-21-17	
Client No.: Client Conta	<del></del>		- Laborator	y Contacts:	<del></del>	3 Day	
Contacts:	Mike Schmidt		Contacts:	Frank E. Ehrenfeld I	II		
Phone:			Phone:	(856) 231-9449			
Fax:	0		Fax:	(856) 231-9818			
Cell/Pager:	216-378-0997		Cell/Pager:	(856) 727-8904			
E-Mail:	0		E-Mail: <u>frankehrenfeld@jatl.com</u>			·	
Chain of Cu	stody:	<del></del>					
Samples Taker	n in Field:		Date:		Time:		
Samples Rec'd	at Laboratory:	DMD	Date:	9/16/11	Time:		
Samples Analy	yzed:	CL	Date:	9/21/11	Time:		
Preliminary Re	esults Faxed:		Date:		Time:		
Preliminary Re	esults E-Mail:		Date:		Time:	<del></del>	

# Summary Data Transmission Electron Microscopy NIOSH 7402

Client	IATL	Volume	Comments	1 Results	<sup>2</sup> Results	<sup>3</sup> Results
Sample ID#	Sample ID#	(L) _ {_	Comments	f/mm²	f/cc	f/cc
082411-01B	4429701	1576	None Detected	< 11	< 0.0027	< 0.0027
082311-01A	7					
082411-02B	4429702	1572	None Detected	< 11	< 0.0027	< 0.0027
082311-02A		}				
082411-03B	4429703	1566	None Detected	< 11	< 0.0027	< 0.0027
082311-03A						
082411-04 <b>B</b>	<b>4429704</b>	1562	None Detected	< 11	< 0.0027	< 0.0027
082311-04A						
082411-05B	4429705	1554	Chrysotile	11	0.0027	0.0027
082311-05B	/					
082411-06B	4429706	1552	None Detected	< 11	< 0.0027	<0.0027
082311-06A	Z					-

1 - Total Asbestos Fibers in relation to area analyzed. 2 - Total Asbestos Fibers	Grid Box #:	7169
of all sizes as a function of the volume of air sampled. 3 - Same as for 2 for		
fibers > 5.0 μm in length.	Instrument (I, II):	I

These preliminary results are issued by IATL to expedite procedures by the clients based upon the above data. IATL assumes that all of the sampling methods and data upon which these results are based, has been accurately supplied by the client. These results may not have been reviewed by the Laboratory Director. Final Certificates of Analysis will follow these preliminary results. The signed COAs are to be considered the official results.

TEM.NIOSH Prelin.001



# PRELIMINARY RESULTS Airborne Asbestos Analysis TEM NIOSH

		L		TEM NIOS	<u>SH</u>		and the state of t
	Client:	RCS Environme 2812 Shakercres		_ _	Project: Project No.:	Cleveland Trencl	her
			OH 44122		PCM Reprep(y/n)	<u>y</u>	
	Client No.:	RCS486		_	Turn-Around Time	<u></u>	3 Day
ΙŤ	Client Conta	icts:		Laborator	y Contacts:		
	Contacts:	Mike Schmidt		Contacts:	Frank E. Ehrenfeld II	1	
	Phone:			Phone:	(856) 231-9449		
ţı	Fax:	0		Fax:	(856) 231-9818		
	Cell/Pager:	216-378-0997		Cell/Pager:	(356) 727-8904		
	E-Mail:	0		E-Mail:	frankehrenfeld@iatl	com	
11	Chain of Cu	stody:					
I	Samples Taker	n in Field:		Date:		Time:	
	Samples Rec'd	at Laboratory:	DMD	Date:	9/16/11	Time:	
ш	Samples Analy	yzed:	CL	Date;	9/21/11	Time:	<del></del> -
1	Preliminary Results Faxed:		Date:		Time:		
	Preliminary Re	esults E-Mail:		Date:		Time:	
			<del></del>	Summary I	Data		

# Summary Data Transmission Electron Microscopy NIOSH 7402

Client Sample ID #	IATL Sample ID#	Volume (L)	Comments	1 Results f/mm <sup>2</sup>	<sup>2</sup> Results f/cc	<sup>3</sup> Results f/cc
и 082411-07В	4429707	FB	None Detected	< 11	< NA	< NA
282411-07A						
<u> </u>						
II				<del> </del>	·	
				<del></del>		-
"						
			<u> </u>		<u> </u>	<u> </u>

1 - Total Asbestos Fibers in relation to area analyzed. 2 - Total Asbestos Fibers	Grid Box #:	7169
of all sizes as a function of the volume of air sampled. 3 - Same as for 2 for		
fibers > 5.0 μm in length.	Instrument (I, II):	1

These preliminary results are issued by IATL to expedite procedures by the clients based upon the above data. IATL assumes that all of the sampling methods and data upon which these results are based, has been accurately supplied by the client. These results may not have been reviewed by the Laboratory Director. Final Certificates of Analysis will follow these preliminary results. The signed COAs are to be considered the official results.

TEM.NIOSH Prelim.001

T	Λ	7	1	•	Interna	tional	Asbestos
Ł.	H		. J	4	Testing	Labor	atories

Client Nam Client Proje	ect #:	RCS Environ	<u>.</u>		-	sis Date: [21/11		IATL Sample #: Client Sample #:	44297 082411-0
sample Typ		PCM Reprep	)					IATL Grid Box #:	71
C Submit								Grid Archive ID #:	
	roscope ID: achi H600AE	3 542-47-3		Dia. (mm²); Area (mm²):	25 385			Magnification:	20,000X
	Z-EDXA Sy			Filter Type: Size (µm):	MCE		Ac	celerating Voltage:	100KeV
	<u>.</u>		<del>Ir</del> id Opening.		mm	Volume	of Air Sampled:	1576	Liters
	Gerid (	Grid o Openings Read	opening Area:		mm² 7	Δnoist	tical Sensitivity:	11.0	f/mm²
			rea Analyzed:		mm²		Detection Limit:		1/cc (0.003)
	Fotal Ashest	os Structures:	NS	D		Non-Ash	estos Structures:	NSD-	
	, 10000	0.5 <b>-</b> 5.0 μm:	NS.	D	•	11017 7100	oolos on notaros.	NoD	
		>5.0µm: Asbestos:	NS	D 11.0	f/mm²		Non-Asbestos:	< 11.0	f/mm²
-		Asbestos;		0.0027	f/ce		Non-Asbestos:		f/ce
				·		Analysis Data	:		
Grid Opening ID	Fiber Number	Structure F B M C	¹ Length ≤5.0 μm	<sup>2</sup> Length > 5.0 μm	<sup>3</sup> Diameter > 0.25 μm	* Chrysotile	**Amphibole	***Non-Asbestos	Comments / Micrograph EDS ID
AI EI	-:	NSD					<del> </del>	<u> </u>	100 10
E2		NSD							
E3		NSD							
E4		NSD	<del></del>		<del> </del>			<u> </u>	
E5	<del></del>	NSD			<del></del>				
E6 E7		NSD NSD	-	. <u>–</u>	<u> </u>				
		NBD		ļ					
	_								
					-		<del> </del>		
		<del> </del>		<del></del>	<del> </del>		<del> </del>	<del> </del>	
								<del> </del>	<del></del> -
		<del> </del>				L	<u>i                                     </u>		
Total	NeD		0	0		0	0		
Total:	NSD		0	0		0	0	0	
Must cor	firm by Morph	ology, SAED, an	d EDXA for eac	h suspect asbe		0	0	Prep Quality:	GOOD
Must cor Record v	firm by Morph	ology, SAED, and Chrysotile DP	d EDXA for eac	h suspect asbe		0	0	<u>'                                    </u>	GOOD
Must con Record v * Define A	firm by Morph isible prominer mphibole (DP rize by EDS	nt Chrysotile DP obtained Y/N). P	d EDXA for eac reflections (002 rint-out EDS and	h suspect asbe	, 220, 200)	<u> </u>		Prep Quality: Dissolution	
Must con Record v * Define A	firm by Morph isible prominer mphibole (DP rize by EDS	at Chrysotile DP	d EDXA for eac reflections (002 rint-out EDS and	h suspect asbe	, 220, 200)	0 E: FIBER ORIEN		Prep Quality: Dissolution Carbon Film	GOOD
Must con Record v * Define A	firm by Morph isible prominer mphibole (DP rize by EDS	nt Chrysotile DP obtained Y/N). P	d EDXA for eac reflections (002 rint-out EDS and	h suspect asbe	, 220, 200)	<u> </u>		Prep Quality: Dissolution Carbon Film Loading Analyzed By:	GOOD <1%

T	Λ	<b>T</b>	T	Interna	tional	Asbestos
1.	$\boldsymbol{L}$		L	Testing	Labor	atories

Client Name	<b>:</b> ;	RCS Environ	mental Group		Analys	is Date:		IATL Sample #:	442970
Client <b>P</b> roje	ct #:				09/2	21/11		Client Sample #:	082411-02
Sample Typ	e:	PCM Reprej	p					IATL Grid Box #:	716
QC Submitt	al						•	Grid Archive ID#:	A
lectron Mic	roscope ID:		Filter	Dia. (mm²):	25			Magnification:	20,000X
<u>I</u> <u>Hit</u> z	chi H600AB	, 542-47-3		Area (mm²):	385			Transportation.	20,0001
EVEX	- EDXA Sys	tem		Filter Type:	MCE		Acc	celerating Voltage:	100KeV
<u> </u>			Filter Por	e Size (μ <b>m</b> ):	0.8			<del></del>	<del></del>
			Grid Opening:	0.115	mm	Volume	of Air Sampled:	1572	Liters
			opening Area:		mm²				,
	Grid (	Openings Read	l / (Required):	7	7	Analyt	ical Sensitivity:	11.0	f/mm²
,		Total A	rea Analyzed:	0.091	mm²	Minimum I	Detection Limit:	0,0027	f/cc (0.003)
		<del></del> -							
1		s Structures:	NS NS			Non-Asb	stos Structures:	NSD	
	,	0.5 - 5.0 μm: >5,0μm:	NS NS						
		Asbestos:	•	11.0	f/mm²		Non-Asbestos:	< 11.0	f/mm²
		Asbestos:		0.0027	f/cc		Non-Asbestos:	< 0.0027	t/cc
									<u> </u>
				ī		Analysis Data	ı:		<del></del>
Grid Opening Number   Structure   Length   Length   Stouth   Structure   $^{1}$ Length   Stouth   Sto					<sup>3</sup> Diameter > 0.25 μm	Chrysotile *	**Amphibole	***Non-Asbestos	
ID	<u></u>	1		<u> </u>			1		EDS ID
A5 B1		NSD							<del> </del>
B2		NSD							
B3		NSD		-	<del></del>	· · · · · · · · · · · · · · · · · · ·			<del>                                     </del>
B4		NSD			<u></u>		<del></del>		<del> </del>
B5		NSD		<del>                                       </del>					<del></del>
B6_		NSD	***						<del></del>
B7		NSD	<u> </u>		<del></del>				
· <del></del>		<del>                                     </del>		<del> </del>	<del></del>			<del> </del>	<del> </del>
		<del>                                     </del>		-			<u> </u>		
	<u> </u>	<del> </del>					<del></del>	<del></del>	<del>                                     </del>
		+		<del> </del>		<del>-</del>			<del> </del>
		<del>                                     </del>	· · · · —			<del></del>	<del> </del>		
		-		<del>                                     </del>		<del> </del>	<del>                                     </del>	-	
		<del> </del>		<del>                                     </del>	<del>                                     </del>		<del>                                     </del>		
Total:	NSD	<del> </del>	0	0	<del> </del>	0	0	0	<del>                                     </del>
	! <del></del>	1		<del></del>		<u> </u>	<del> </del>		<u> </u>
			nd EDXA for eac					Prep Quality:	
	-	-	reflections (002		220, 200)			Dissolution	
	-	obtained Y/N). I	Print-out EDS and	a anach.				Carbon Film	
	rize by EDS Ober Length an	id 3 fiber diamet	er (um)		SEE REVER	SE FIRER OR	ENTATION M.	Loading AP	<del></del>
, a record i	mer rengin an	ier > HO€E (MSTUR)	er (hatri)		VILLA CENT ATTI	og, rupuk Ok			
Comments:			<del></del>			<del></del>		Analyzed By	CL
								Reviewed By	:

T	Λ	T	T	Internatio	onal	Asbestos
Д.	a		L	Testing La	bora	tories

I Hite	croscope ID: chi H600AB - EDXA Sys	· ······						Client Sample #: IATL Grid Box #: Grid Archive ID #:	710
	. 201410,0		Effective	Dia. (mm²): Area (mm²): Filter Type: re Size (μm):	25 385 MCE 0.8		Ao	Magnification:	20,000X 100KeV
	Grid C	Grid Openings Read	Grid Opening: opening Area: I / (Required): rea Analyzed:	0.013 7	mm mm² 7 mm²	Analyt	of Air Sampled: ical Sensitivity: Detection Limit;	11.0	Liters f/mm² f/cc (0.003)
Т		os Structures: 0.5 - 5.0 µm: >5.0µm: Asbestos: Asbestos:		D	f/mm¹ f/ce	Non-Asbe	Non-Asbestos:	<del></del>	f/mm² f/ce
Grid Opening ID	Fiber Number	Structure FBMC	¹ Length ≤ 5.0 μm	<sup>2</sup> Length > 5.0 μm	<sup>3</sup> Diameter > 0.25 μm	Chrysotile	**Amphibole	***Non-Asbestos	Comments / Micrograph / EDS ID
\9 F1		NSD							
F2		NSD							
F3	<del></del>	NSD							
F4		NSD	_	<del> </del> -	<u> </u>				
F5 F6	-	NSD NSD					ļ	_	
F7		NSD							
Total:	NSD		0	0		0	0	0	
Record v ** Define A *** Character	isible prominen mphibole (DP o rize by EDS	ıt Chrysotile DP	nd EDXA for eac reflections (002 rint-out EDS and er (µm)	,004, 110, 130,	220, 200)	SE: FIBER OR	ENTATION M.	Prep Quality: Dissolution Carbon Film Loading AP Analyzed By:	GOOD GOOD 1%

Client Name Client Proje Sample Typ QC Submitt	et#: e:	RCS Environ PCM Repre		:	_	sis <b>D</b> ate: 21/11	,	IATL Sample #: Client Sample #: IATL Grid Box #: Grid Archive ID #:	716
Electron Mic	roscope ID:		Filter	Dia. (mm²):	25			Magnification:	20,000X
_	ichi H600AB I- EDXA Sys		Effective	Area (mm²): Filter Type: e Size (μm):	385 MCE 0.8		Aα	celerating Voltage:	100KeV
	Grid (	Grid Ope <b>ning</b> s Read	Grid Opening: opening Area: l / (Required); rea Analyzed:	0.115 0.013 7 0.091	mm mm² 7 mm²	Analyt	of Air Sampled: tical Sensitivity: Detection Limit:	1562 11.0 0.0027	Liters f/mm² f/cc (0.003)
. 1		os Structures: 0.5 - 5.0 µm: >5.0µm: Asbestos: Asbestos:		D	f/mm² f/ec	Non-Asbe	estos Structures: Non-Asbestos: Non-Asbestos:	NSD < 11.0 < 0.0027	f/mm² f/cc
					4	Analysis Data	ı:		
Grid Opening ID	Fiber Number	Structure FBMC	¹ Length ≤5.0 μm	<sup>2</sup> Length > 5.0 μm	<sup>3</sup> Diameter > 0.25 μm	Chrysotile	**Amphibole	***Non-Asbestos	Comments / Micrograph / EDS ID
34 C1	<del></del>	NSD							
C2		NSD			<u> </u>				
C3		NSD	<u>-</u> .		<del> </del>	<u> </u>		_	<u> </u>
C4		NSD		<del></del>			<u></u>		
. C6		NSD NSD					<del>                                     </del>	<u>.</u>	<u></u>
C7		NSD							
						_			
T.4.1.	Map		0	0		0	0	0	
Total:	NSD	<u> </u>		<del>'                                    </del>	<del></del>	<u> </u>	<u></u>	<u>` </u>	
		-	nd EDXA for eac reflections (002	-				Prep Quality: Dissolution	GOOD
			rint-out EDS an		, 220, 200)			Carbon Film	GOOD
	nize by EDS	,						Loading	1%
, 2 Record I	liber Length an	d3 fiber diamet	er (µm)		SEE REVER	SE: FIBER OR	ENTATION M.	AP	
Comments:						<del>.</del>		- Analyzed By	
								Reviewed By	

# IATL International Asbestos Testing Laboratories

## **TEM Air Sample Worksheet**

Hitsehi H600AB, 542-47-3   Effective Area (nmm):   345   MCE   Filter Fore Size (µm):   0.35   MCE   Filter Fore Size (µm):   0.37   Minimum of Air Sampled:   1554   Liters	Client Name Client Proje Sample Typ QC Submitt	ect #: e:	PCM Repre	<u>mental Group</u> P			sis Date: 21/11	]	IATL Sample #: Client Sample #: IATL Grid Box #: Grid Archive ID #:	442970 082411-0 716
Grid Opening Read / (Required):   7	<u>I</u> <u>Hita</u>	chi H600AE		Effective	Area (mm²): Filter Type:	385 MCE		Ac		20,000X 100KeV
1.5 - 5.0 μm   75.0 μm		Grid (	Grid Openings Read	opening Area: l / (Required):	0.013 7	mm² 7	Analy	tical Sensitivity.	11.0	•
Structure   1 Length   5.0 μm   1 Length   5.0 μm   5	Т		0.5 - 5.0 μm: >5.0μm: Asbestos;	1	5D 11.0	f/cc		Non-Asbestos:	< 11.0	_
C2 NSD C3 NSD C4 1 C 1 CD C5 NSD C6 NSD C7 NSD C7 NSD C8 NSD C9 N	Opening			_		<sup>3</sup> Diameter			***Non-Asbestos	Comments / Micrograph / EDS ID
C3 NSD C4 1 C 1 CD  C5 NSD C6 NSD C7 NSD C7 NSD C7 NSD C8 NSD C9	C1 C1		NSD	• • •						
C4 1 C 1 CD  C5 NSD  C6 NSD  C7 NSD  Total: 1 1 0 1 0 0  Must confirm by Morphology, SAED, and EDXA for each suspect asbestos fiber Record visible prominent Chrysotile DP reflections (002,004, 110, 130, 220, 200)  Define Amphibole (DP obtained Y/N). Print-out EDS and attach.  Carbon Film GOO:			<del> </del>		ļ	ļ				
C5 NSD C6 NSD C7 NSD C7 NSD C8 NSD C9		<u> </u>	<del></del>	<del></del>	<del> </del>		(ID)			
C6 NSD  C7 NSD  Total: 1 1 0 1 0 C  Must confirm by Morphology, SAED, and EDXA for each suspect asbestos fiber Record visible prominent Chrysotile DP reflections (002,004, 110, 130, 220, 200)  Define Amphibole (DP obtained Y/N). Print-out EDS and attach.  Prep Quality: Dissolution  GOO: Carbon Film  GOO:		1	<del> </del>	1			СБ			
C7 NSD NSD O O O O O O O O O O O O O O O O O O O	-		+		<del> </del>	<del>                                     </del>		<u> </u>		
Must confirm by Morphology, SAED, and EDXA for each suspect asbestos fiber  Record visible prominent Chrysotile DP reflections (002,004, 110, 130, 220, 200)  Define Amphibole (DP obtained Y/N). Print-out EDS and attach.			_							
Must confirm by Morphology, SAED, and EDXA for each suspect asbestos fiber  Record visible prominent Chrysotile DP reflections (002,004, 110, 130, 220, 200)  Define Amphibole (DP obtained Y/N). Print-out EDS and attach.										
Must confirm by Morphology, SAED, and EDXA for each suspect asbestos fiber  Record visible prominent Chrysotile DP reflections (002,004, 110, 130, 220, 200)  Define Amphibole (DP obtained Y/N). Print-out EDS and attach.										
Record visible prominent Chrysotile DP reflections (002,004, 110, 130, 220, 200)  Define Amphibole (DP obtained Y/N). Print-out EDS and attach.  Carbon Film GOO:	Total:	1		1	0		1	0	0	
, 2 Record Fiber Length and 3 fiber diameter (µm) SEE REVERSE: FIBER ORIENTATION MAP	Record v  Define A  Character	isible prominer mphibole (DP rize by EDS	nt Chrysotile DP obtained Y/N). I	reflections (002 Print-out EDS an	,004, 110, 130	, 220, 200)	SE: FIBER OR	UENTATION M.	Dissolution Carbon Film Loading	GOOD GOOD <1%

T	Λ	<b>T</b>	<b>\T</b>	Interna	tional	Asbestos
Ł.	a	. Д		Testing	Labor	atories

Client Name Client Proje		RCS Environ	mental Group	l		sis Date: 21/11	ı	IATL Sample #: Client Sample #:	442970 082411-06
Sample Typ	e:	PCM Repre	р					IATL Grid Box #:	716
C Submitt	al						;	Grid Archive ID#:	C
	roscope ID:	1 542 47 2		Dia. (mm²): Area (mm²):	25 385		- · · · · · · · · · · · · · · · · · · ·	Magnification:	20,000X
	- EDXA Sys			Filter Type: e Size (µm):	MCE		Ac	celerating Voltage:	100KeV
			Grid Opening:	0.115	mm mm²	Volume	of Air Sampled:	1552	Liters
	Grid (		opening Area: l / (Required):	0.013 7	7	Analvi	ical Sensitivity:	11.0	f/mm²
		_	rea Analyzed:	0.091	mm²		Detection Limit:	0.0027	f/∞ (0.003)
T		os Structures: 0.5 - 5.0 µm: >5.0µm: Asbestos:		D D 11.0	f/mm²	Non-Asbe	estos Structures:		ýmm²
	<del></del>	Asbestos:	<	0.0027	f/cc	· · · · · · · · · · · · · · · · · · ·	Non-Asbestos:	< 0.0027	f/ec
		<del> </del>				Analysis Data	ı:		
Grid Opening   ID	Fiber Number	Structure FBM C	¹ Length ≤ 5.0 μm	<sup>2</sup> Length > 5.0 μm	<sup>3</sup> Diameter > 0.25 μm	Chrysotile *	**Amphibole	***Non-Asbestos	Comments / Micrograph / EDS ID
1 C1		NSD		<del>-</del>	<u> </u>				<u> </u>
C2		NSD							
C3		NSD							
C4		NSD					ļ	<u> </u>	<u> </u>
B7		NSD					<u> </u>		
B8 C8		NSD NSD	-	<del> </del>	ļ.,	<u> </u>	-		
Ca		NaD	<del></del>	<del>                                     </del>			-	<del>                                     </del>	
				<u> </u>			<u> </u>	ļ	<u> </u>
		<del> </del>				<del> </del>		<u> </u>	<del> </del>
		<del> </del>		<del> </del>	<del> </del>			<del> </del>	<del>                                     </del>
	<del></del>	<del> </del>		<del> </del> -	<del> </del>			<del> </del>	<del> </del>
Total:	NSD		0	0		0	0	0	
Record vi	sible prominer mphibole (DP	ni Chrysotile DP	nd EDXA for eac reflections (002 Print-out EDS and	,004, 110, 130,				Prep Quality: Dissolution Carbon Film	GOOD
	ize by EDS iber Length an	d 3 fiber diamet	er (µm)		SEE REVER	SE: FIBER OR	IENTATION M.	Loading AP	<1%
Comments:								_ Analyzed By	CL
								Reviewed By	

T	Λ	71	International Asbestos
1.	ß		Testing Laboratories

Client Name Client Proje		RCS Environ	mental Group	!	-	sis Date: 21/11		IATL Sample #: Client Sample #:	442970 082411-07
Sample Typ		PCM Repres	)				l	IATL Grid Box #:	716
QC Submitt								Grid Archive ID#:	C
	croscope ID:	) 542 47 3		Dia. (mm²): Area (mm²):	25 385	<u> </u>	<del></del>	Magnification:	20,000X
	- EDXA Sys			Filter Type: Size (µm):	MCE		Ac	celerating Voltage:	100KeV
			Frid Opening:	0.115	mm mm²	Volume	of Air Sampled:	FB	Liters
	Grid C	penings Read		7	(10)	Analy	tical Sensitivity:	11.0	f/mm²
		Total A	rea Analyzed:	0.091	mm²	Minimum I	Detection Limit:	NA	f/cc (0.003)
-		os Structures: 0.5 - 5.0 μm: >5.0μm:	NSI NSI NSI	D	· ·	Non-Asb	estos Structures:	NSD	
		Asbestos:		11.0 NA	f/mm f/cc		Non-Asbestos: Non-Asbestos:		f/mm² f/cc
				·		Analysis Data	:		
Grid Opening ID	Fiber Number	Structure F B M C	¹ Length ≤ 5.0 μm	<sup>2</sup> Length > 5.0 μm	<sup>3</sup> Diameter > 0.25 µm	* Chrysotile	**Amphibole	***Non-Asbestos	Comments / Micrograph / EDS ID
C5 B1		NSD		<u> </u>					
B2		NSD							
В3		NSD							
B4		NSD							
B5		NSD							
B6		NSD	· · · · · · · · · · · · · · · · · · ·	<del> </del>		1			
B7	<u> </u>	NSD			-	<u></u>			
			_						
	<u> </u>		<del></del>				<u> </u>		
:									
Total:	NSD	<del> </del>	0	0		0	0	0	
* Must con	firm by Morph	ology, SAED, ar	d EDXA for eac	h suspect asbe	stos fiber			Prep Quality:	-
		nt Chrysotile DP		_				Dissolution	GOOD
** Define A	mphibale (DP	obtained Y/N). P	rint-out EDS and	d attach.				Carbon Film	GOOD
*** Character	-	10.00			OFF D	r. PIDEN ANIES	DA TECNET SAAS	Loading	<1%
1,2 Record F Comments:	iber Length an	d 3 fiber diarnete	г (µm)		SEE KEVERS	E: FIBER ORIENT	IATION MAP	Analyzed By	: CL
				-		<del></del> .		Reviewed By	
				_				_ IN VICTOR By.	



## **CERTIFICATE OF ANALYSIS**

Client:

**RCS Environmental Group** 

2812 Shakercrest Blvd

Beachwood

44122

Report Date:

9/21/2011

Project:

Cleveland Trencher

Project No.:

#### TEM AIR SAMPLE ANALYSIS SUMMARY

La	ab No.	Client No.	Location	Volume	Result	Asbestos Types
44	29708A	01A/01B	I/SBldg.SouthEndBy CtrOfStandingBldg. 082511/082611	1522 Liters	<11.0 Fibers/mm² <0.0028 Fibers/cc	None Detected
44	29709A	02A/02B	WestSideOfProperty @WestSideGate 082511/082611	1520 Liters	<11.0 Fibers/mm² <0.0028 Fibers/cc	None Detected
44	29710A	03A/03B	SouthEndOfProperty NearCtrOfSouthSide 082511/082611	1514 Liters	<11.0 Fibers/mm² <0.0028 Fibers/cc	None Detected
44	2971 1A	04A/04B	EastSideIn TheSouthEnd 082511/082611	1502 Liters	<11.0 Fibers/mm² <0.0028 Fibers/cc	None Detected
44	29712A	05A/05B	EastSideOfProperty NearCtrOfEastSide 082511/082611	1500 Liters	<11.0 Fibers/mm² <0.0028 Fibers/cc	None Detected
44	29713A	06A/06B	South Side Of Decon Area 082511/082611	1490 Liters	<11.0 Fibers/mm² <0.0028 Fibers/cc	None Detected

NIST-NVLAP No. 101165-0

AIHA Lab No. 100188

NYS-DOH No. 11021

Methodology: NIOSH 7402

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any agency of the U.S. government.

IATL assumes that all sampling methods and data upon which these results are based have been accurately supplied by the client. Method requires submittal of blanks for analysis. Detection Limit (Reporting Limit) is dependent upon the volume of air sampled. NIOSH guidelines recommend a These results are not blank corrected.

Analysis Performed By: C. Liska

Date: 9/21/2011

Page 1 of 2

Approved By: <a>O</a>

Frank E Ehrenfeld, III Laboratory Director



### **CERTIFICATE OF ANALYSIS**

Client:

**RCS Environmental Group** 

2812 Shakercrest Blvd

Beachwood

Blvd

44122

OH

Report Date:

9/21/2011

Cleveland Trencher

Project No.:

Project:

#### TEM AIR SAMPLE ANALYSIS SUMMARY

Lab No.	Client No.	<u>Location</u>	<u>Volume</u>	Result	Asbestos Types
4429714A	07A/07B	NorthSideOfProperty EastOfOfficeBldg. 082511/082611	1486 Liters	<11.0 Fibers/mm² <0.0028 Fibers/cc	None Detected
4429715A	08A/08B	Field Blank 082511/082611	NA Liters	<9.6 Fibers/mm² NA Fibers/cc	None Detected

NIST-NVLAP No. 101165-0

AIHA Lab No. 100188

NYS-DOH No. 11021

Methodology: NIOSH 7402

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any agency of the U.S. government.

IATL assumes that all sampling methods and data upon which these results are based have been accurately supplied by the client.

Method requires submittal of blanks for analysis. Detection Limit (Reporting Limit) is dependent upon the volume of air sampled. NIOSH guidelines recommend a minimum of 400 L (0.0074 fcc).

These results are not blank corrected.

Analysis Performed By: C. Liska

Date: 9/21/2011

Page 2 of 2

### Transmission Electron Microscopy - Sample Data

Client: RCS Environmental Group

2812 Shakercrest Blvd

Beachwood

44122

Report Date:

9/21/2011

Project:

Cleveland Trencher

Project No.:

IATL No.:

Client Sample No.:

4429708A

01A/01B

Description/ Location:

I/SBldg.SouthEndBy

CtrOfStandingBldg. 082511/082611

Filter Type:

Filter Size: Pore Size:

1522 Liters

MCE 385 mm<sup>2</sup> 0.80 µm

ANALYSIS RESULTS:

Grid Openings:

Opening Area: Area Analyzed:

Sensitivity: Detection Limit:

11.0 Fibers/mm<sup>2</sup>

0.0028 Fibers/cc

ASBESTOS FIBERS:

>=0.5µm to <5.0µm:

>=5.0µm: Fibers/Area:

Concentration: Types Identified:

Type 2: Type 3:

NON-ASBESTOS FIBERS:

Fibers/Area: Concentration: Types Identified:

Type 2:

Type 3: Type 4:

Micrograph Number: X-Ray Spectrum Number:

0.013 mm<sup>2</sup> 0.091 mm<sup>2</sup>

None Detected

None Detected None Detected <11.0 Fibers/mm³

<0.0028 Fibers/ec

None Detected

None Detected

<11.0 Fibers/mm² <0.0028 Fibers/cc

None Detected

#### Methodology: NIOSH 7402

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any agency of the U.S. government.
IATL assumes that all sampling methods and data upon which these results are based have been accurately supplied by the client.
Method requires submittal of blanks for analysis. Detection Limit (Reporting Limit) is dependent upon the volume of air sampled. NIOSH guidelines recommend a minimum of 400 L (0.0074 f/cc,
These results are not blank corrected.

Analysis l	Perfomed By:	C. Liska	
<b>.</b> .	0.01.0011		
Date:	9/21/2011		

Page 1 of 8

# **Transmission Electron Microscopy - Sample Data**

Client: RCS Environmental Group

2812 Shakercrest Blvd

Beachwood

44122

Report Date:

9/21/2011

Project:

Cleveland Trencher

Project No.:

IATL No.: Client Sample No.: 4429709A

02A/02B

Description/ Location:

WestSideOfProperty

@WestSideGate 082511/082611

Filter Type:

Filter Size: Pore Size:

1520 Liters MCE

385 mm<sup>2</sup> 0.80 µm

ANALYSIS RESULTS:

Grid Openings:

Opening Area: Area Analyzed: Sensitivity:

Detection Limit:

11.0 Fibers/mm<sup>2</sup>

ASBESTOS FIBERS:

>=0.5µm to <5.0µm:

>=5.0µm: Fibers/Area:

Concentration: Types Identified:

Type 2: Type 3:

NON-ASBESTOS FIBERS:

Fibers/Area: Concentration: Types Identified:

Type 2: Type 3: Type 4:

Micrograph Number: X-Ray Spectrum Number:

0.013 mm² 0.091 mm<sup>2</sup>

0.0028 Fibers/cc

None Detected None Detected

None Detected <11.0 Fibers/mm<sup>2</sup> <0.0028 Fibers/cc

None Detected

None Detected

<11.0 Fibers/mm<sup>2</sup> <0.0028 Fibers/cc

None Detected

#### Methodology: NIOSH 7402

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any agency of the U.S. government. IATL assumes that all sampling methods and data upon which these results are based have been accurately supplied by the client Method requires submittal of blanks for analysis. Detection Limit (Reporting Limit) is dependent upon the volume of air sampled. NIOSH guidelines recommend a minimum of 400 L (0.0074 fee). These results are not blank corrected.

Analysis Perfomed By:	C. Liska	
Date: 9/21/2011		

Page 2 of 8

### Transmission Electron Microscopy - Sample Data

Client: RCS Environmental Group

2812 Shakercrest Blvd

Beachwood

OH

44122

Report Date:

9/21/2011

Project:

Cleveland Trencher

Project No.:

IATL No.:

Client Sample No.:

4429710A 03A/03B Description/ Location:

SouthEndOfProperty NearCtrOfSouthSide

082511/082611

Volume: Filter Type: Filter Size:

Pore Size:

MCE 385 mm²

1514 Liters

0.80 µm

ANALYSIS RESULTS:

Grid Openings:

Opening Area:
Area Analyzed:
Sensitivity:
Detection Limit:

7 0.013 mm²

0.091 mm<sup>2</sup> 11.0 Fibers/mm<sup>2</sup> 0.0028 Fibers/cc

ASBESTOS FIBERS: >=0.5µm to <5.0µm:

>=0.5µm to <5.0 >=5.0µm; Fibers/Area: Concentration: Types Identified: None Detected None Detected None Detected <11.0 Fibers/mm²

<0.0028 Fibers/cc None Detected

Type 2: Type 3:

NON-ASBESTOS FIBERS:

Fibers/Area:
Concentration:
Types Identified:

None Detected

<11.0 Fibers/mm<sup>2</sup> <0.0028 Fibers/cc None Detected

Type 2: Type 3: Type 4:

Micrograph Number: X-Ray Spectrum Number:

#### Methodology: NIOSH 7402

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any agency of the U.S. government.

IATL assumes that all sampling methods and data upon which these results are based have been accurately supplied by the client.

Method requires submittal of blanks for analysis. Detection Limit (Reporting Limit) is dependent upon the volume of air sampled. NIOSH guidelines recommend a minimum of 400 L (0.0074 floc).

These results are not blank corrected.

Analysis Perfomed By:	C. Liska		 _

Date: 9/21/2011

Page 3 of 8

# Transmission Electron Microscopy - Sample Data 9/21/2011

Client: RCS Environmental Group

2812 Shakercrest Blvd

Beachwood

44122

Report Date:

Project:

Cleveland Trencher

Project No.:

IATL No.: Client Sample No.: 4429711A 04A/04B

Description/ Location:

EastSideIn TheSouthEnd

082511/082611

Volume: Filter Type: Filter Size:

1502 Liters MCE 385 mm²  $0.80~\mu m$ 

ANALYSIS RESULTS:

Grid Openings:

Pore Size:

Opening Area: Area Analyzed: Sensitivity: Detection Limit: 0.013 mm²

0.091 mm<sup>2</sup> 11.0 Fibers/mm<sup>2</sup> 0.0028 Fibers/cc

None Detected

ASBESTOS FIBERS: >=0.5µm to <5.0µm: >=5.0µm: Fibers/Area:

None Detected None Detected <11.0 Fibers/mm² Concentration: <0.0028 Fibers/cc Types Identified: None Detected

Type 2: Type 3:

Type 3:

NON-ASBESTOS FIBERS: Fibers/Area:

Concentration: Types Identified: Type 2:

None Detected <11.0 Fibers/mm²

<0.0028 Fibers/cc None Detected

Type 4:

Micrograph Number: X-Ray Spectrum Number:

#### Methodology: NIOSH 7402

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any agency of the U.S. government. IATL assumes that all sampling methods and data upon which these results are based have been accurately supplied by the client Method requires submittal of blanks for analysis. Detection Limit (Reporting Limit) is dependent upon the volume of air sampled. NIOSH guidelines recommend a minimum of 400 L (0.0074 f/cc). These results are not blank corrected.

Analysis	Perfomed By:	C. Liska	 
Date:	9/21/2011		Dogo

Page 4 of 8

### Transmission Electron Microscopy - Sample Data

Client: RCS Environmental Group

2812 Shakercrest Blvd

Beachwood

44122

Report Date:

9/21/2011

Project:

Cleveland Trencher

Project No.:

IATL No.:

4429712A

05A/05B Client Sample No.:

Description/Location:

EastSideOfProperty

NearCtrOfEastSide 082511/082611

Volume: Filter Type:

Filter Size: Pore Size:

1500 Liters MCE

385 mm<sup>2</sup> 0.80 µm

ANALYSIS RESULTS:

Grid Openings:

Opening Area: Area Analyzed:

Sensitivity: Detection Limit:

0,013 mm² 0.091 mm² 11.0 Fibers/mm<sup>2</sup>

0.0028 Fibers/cc

ASBESTOS FIBERS:

>=0.5μm to <5.0μm;

>=5.0µm: Fibers/Area:

Concentration: Types Identified: None Detected

None Detected None Detected

<11.0 Fibers/mm² <0.0028 Fibers/cc None Detected

Type 2: Type 3;

NON-ASBESTOS FIBERS:

Fibers/Area: Concentration:

Types Identified:

Type 2: Type 3: Type 4:

None Detected

<11.0 Fibers/mm² <0.0028 Fibers/cc None Detected

Micrograph Number: X-Ray Spectrum Number:

### Methodology: NIOSH 7402

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any agency of the U.S. government.					
IATL assumes that all sampling methods and data upon which these results are based have been accurately supplied by the client.					
Method requires submittal of blanks for analysis. Detection Limit (Reporting Limit) is dependent upon the volume of air sampled. NIOSH guidelines recommend a minimum of 400 L	(0.0074 f/cc				
These results are not blank corrected.					

Analysis Perfomed By:	C. Liska	

9/21/2011

Page 5 of 8

## Transmission Electron Microscopy - Sample Data

Client: RCS Environmental Group

2812 Shakercrest Blvd

Beachwood

OH

44122

Report Date:

9/21/2011

Project:

Cleveland Trencher

Project No.:

LATL No.:

Client Sample No.:

4429713A

06A/06B

Description/ Location:

South Side Of Decon Area

082511/082611

Volume: Filter Type:

Filter Size: Pore Size:

1490 Liters MCE

385 mm² 0.80 µm

ANALYSIS RESULTS:

Grid Openings:

Opening Area: Area Analyzed; Sensitivity:

Detection Limit:

ASBESTOS FIBERS:

0.013 mm<sup>2</sup>

0.091 mm² 11.0 Fibers/mm<sup>2</sup> 0.0028 Fibers/cc

None Detected

None Detected

None Detected

<11.0 Fibers/mm²

>=0.5µm to <5.0µm: >≃5.0μm:

Fibers/Area: Concentration: Types Identified:

<0.0028 Fibers/cc None Detected

Type 2: Type 3:

NON-ASBESTOS FIBERS:

Fibers/Area: Concentration: Types Identified: None Detected

<11.0 Fibers/mm² <0.0028 Fibers/cc None Detected

Type 2: Type 3: Type 4:

Micrograph Number: X-Ray Spectrum Number:

### Methodology: NIOSH 7402

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any agency of the U.S. government. IATL assumes that all sampling methods and data upon which these results are based have been accurately supplied by the client. Method requires submittal of blanks for analysis. Detection Limit (Reporting Limit) is dependent upon the volume of air sampled. NIOSH guidelines recommend a minimum of 400 L (0.0074 f/cc). These results are not blank corrected.

Analysis P	erfomed By:	C. Liska	 
Date:	9/21/2011		

Page 6 of 8

Transmission Electr	on Microscopy	- Sample	Data
---------------------	---------------	----------	------

Client: RCS Environmental Group

2812 Shakercrest Blvd

Beachwood

OH

44122

Report Date:

9/21/2011

Project:

Cleveland Trencher

Project No.:

IATL No.; Client Sample No.: 4429714A

07A/07B

Description/ Location:

NorthSideOfProperty

EastOfOfficeBldg. 082511/082611

Volume: Filter Type:

Filter Size: Pore Size:

1486 Liters

MCE 385 mm² 0.80 µm

ANALYSIS RESULTS:

Grid Openings:

Opening Area: Area Analyzed: Sensitivity:

Detection Limit:

0.013 mm<sup>2</sup>

ASBESTOS FIBERS:

>=0.5µm to <5.0µm:

>=5.0µm: Fibers/Area: Concentration:

Types Identified: Type 2: Type 3:

NON-ASBESTOS FIBERS:

Fibers/Area: Concentration: Types Identified:

Type 2: Type 3: Type 4:

Micrograph Number: X-Ray Spectrum Number:

0.091 mm<sup>2</sup> 11.0 Fibers/mm<sup>2</sup>

0.0028 Fibers/cc

None Detected None Detected

None Detected <11.0 Fibers/mm² <0.0028 Fibers/cc

None Detected

None Detected

<11.0 Fibers/mm² <0.0028 Fibers/cc None Detected

Methodology: NIOSH 7402

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any agency of the U.S. government. IATL assumes that all sampling methods and data upon which these results are based have been accurately supplied by the client. Method requires submittal of blanks for analysis. Detection Limit (Reporting Limit) is dependent upon the volume of air sampled. NIOSH guidelines recommend a minimum of 400 L (0.0074 flcc). These results are not blank corrected.

Analysis Perfomed By:	C. Liska		
			_

Date:

9/21/2011

Page 7 of 8

#### Transmission Electron Microscopy - Sample Data 9/21/2011 Client: RCS Environmental Group Report Date:

2812 Shakercrest Blvd

Beachwood

44122

Project:

Cleveland Trencher

Project No.:

IATL No.:

4429715A

Description/ Location:

Field Blank

Client Sample No.:

08A/08B

082511/082611

Volume: Filter Type:

Filter Size: Pore Size:

MCE 385 mm²

0.80 µm

ANALYSIS RESULTS:

Grid Openings:

Opening Area: Area Analyzed: Sensitivity: Detection Limit:

0.013 mm<sup>2</sup> 0.104 mm<sup>2</sup> 9.60 Fibers/mm<sup>2</sup> NA Fibers/cc

ASBESTOS FIBERS:

>=0.5µm to <5.0µm: >=5.0µm: Fibers/Area:

Concentration:

Types Identified:

None Detected <9.6 Fibers/mm² NA Fibers/cc

None Detected

None Detected

None Detected

Type 2: Type 3:

NON-ASBESTOS FIBERS:

Fibers/Area: Concentration: Types Identified: None Detected

<9.6 Fibers/mm<sup>2</sup> NA Fibers/cc None Detected

Type 2: Type 3: Type 4:

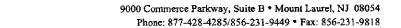
> Micrograph Number: X-Ray Spectrum Number:

> > Methodology: NIOSH 7402

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any agency of the U.S. government IATL assumes that all sampling methods and data upon which these results are based have been accurately supplied by the client. Method requires submittal of blanks for analysis. Detection Limit (Reporting Limit) is dependent upon the volume of air sampled. NIOSH guidelines recommend a minimum of 400 L. (0.0074 flee). These results are not blank corrected.

Analysis Perfomed By:		C. Liska	 	
Date:	9/21/2011			

Page 8 of 8





# **Chain of Custody**

-Airborne Asbestos -

Contact Information  Client Company: RCS ENUICONMENTAL Project Number:  Office Address: 2012 SHAKERCREST Project Name: CENDAND TRENSFER  City, State, Zip: IBEACHWOOD, OH YYIZZ Primary Contact: MIKE SCH MIDT  Fax Number: Office Phone: 216-376-0997  Email Address: Cell Phone:  RCSEANICONMENTAL MSN. COM
Analysis/Instructions:  PCM  TEM - NIDSH 7402  PLM  Other  Method (specify): PEASE - LUSE METHOD 7400 pm 7402 on EACH CASSETTE.  Special Instructions:
Turnaround Time  Preliminary Results Requested Date:  Specific date / time  10 Day 5 Day 23 Day 12 Day 1 Day* 12 Hour** 6 Hour** RUSH**  Note: Viable/Culturable samples may require several days in order to establish countable colony forming units (CFU) of fungi.  * End of next business day unless otherwise specified. ** Matrix Dependent. ***Please notify the lab before shipping***
Chain of Custody  Relinquished (Name/Organization):  Received (Name / IATL):  Sample Login (Name / IATL):  Analysis(Name(s) / IATL):  QA/QC Review (Name / IATL):  Archived / Released:  QA/QC InterLAB Use:  Date:  Time:  Time:  2011  Time:  Time:  Time:  Time:  Time:  Archived / Released:  QA/QC InterLAB Use:  Date:  Time:
Celebrating 25 years one sample at a time

www.jatl.com

JLLP-PRECISION000269

- 1 -



ASBESTOS TESTING LABORATORIES

9000 Commerce Parkway, Suite B • Mount Laurel, NJ 08054 Phone: 877-428-4285/856-231-9449 • Fax: 856-231-9818

# Sample Log

-Airborne Asbestos -

Client: RCS ENVIRONMENTAL	Project: CLEURIAND TRENCHER
Sampling Date: 0/25-26/11	

Client Sample #	iATL#	Location/ Description	Flow Rate	<u>Start</u> End	Sampling time (min)	Area (ft2) Volume (L)	Results
082611-01B	4429708					1522	
082411-02B	4429709					1520	
092611-03B 092511-03A	4429710					1514	· -
092411-04B	4429711					1502	
082611-05B 082511-05A	4429712		!			1500	
082611-06B	4429713					1490	
092611-078	4429714					1486	
082511-08B	4429715	BLANK				MA	
_							
			<u></u>				
<del></del>							· _ ·
		-					· · · -
	· ·		_			! · .	

\*\* insufficient Sample Provided to Perform QC Reanalysis (<200mg)

\*\* = Insufficient Sample Provided to Analyze (<50mg) \*\*\* = Matrix / Substrate Interference Possible

FB = Method Requires the submittal of blank(s). ML = Multi Layered Sample. May result in inconsistent results.

These preliminary results are issued by iATL to expedite procedures by clients based upon the above data. iATL assumes that all of the sampling methods and data upon which these results are based, has been accurately supplied by the client. These results may not have been reviewed by the Laboratory Director. Final Certificate of Analysis will follow these preliminary results. The signed COA is to be considered the official results. All EPA, HUD, and NIDEP conditions are like. conditions apply.

> Celebrating 25 years...one sample at a time www.iatl.com

- 2 -

L	
г	
г	
τ	Į
$\mathbf{I}$	_
τ	J
ス	
П	
C	)
Ū	7
_	
C	)
S	
	)

165	, 
(5)	RCS Environmental Group

# ASBESTOS AIR MONITORING REPORT

ARRADIOTIVE INCODMATION

Date	8/25/2011
Client	
Project	
Project No	
Anglidical	

			DESCRIPTIVE INC	JAMATUN Analytical	Analytical Method		
SAMPLE I.D.	SAMPLE TYPE	WORKERS NAME	SOCIAL SECURITY #	LOCATION	ACTIVITY	RESPIRATOR TYPE	
082511-01A	BGD			Inside Building Southendby Conterof standing Build	1		
082511-02A	BG D			Westside of Property C Westside Cate			
042511 -03 A	BCO			Southend of Property Near Conter of Southeide			
082511-048	BGD			Eastside in the Southend			
082511-05A	BGD			Eastside of Property Near Center of Eastside			
087511-00 A	<b>3</b> GD			Southside of Decen Area			
0 \$2511-07#	BCD			Northerd of Property Fast of Office Bulde	1		
08251-08#	FB			Field Blank			
						<u> </u>	
						<u> </u>	

#### **ANALYTICAL INFORMATION**

				7-71	MARI II GA							
SAMPLE I.D. PUMP #	PUMP #	CALIB. FLOW RATE (L/min)		RU	RUNNING TIME (min)			FIBERS/	FIBERS/	LOQ	FIBER/om <sup>a</sup>	
GAMILLE I.D.	COME #	BEGINNING	END	AVERAGE	START	STOP	DURATION	(Litera)	FIELDS	(Blank Corr)	PIBERS/ om <sup>4</sup>	(Blank Corr)
082511-014	49	2.0	2.0	2.0	0817	1451	396	792				
082511-02A	. 20	2.0	2.0	20	0820	1454	394	788				
082511-03 A	. 54	2.0	2.0	2.0	0824	1458	392	784				
082511-04A	99	2.0	2.0	2.0	0833	1459	386	772				
092511-05 A	87	2.0	20	2.0	0837	1503	386	772				
082511-06A	79	2.0	Z.0	2.0	0841	1505	384	768				
082511-07 A	P02	2.0	2.0	2.0	0849	1509	380	760				
082511-08#	NA	NA	ΝA	NA	NA	N4	NA					
		<u> </u>							L		<u> </u>	
		1 T					1			{		

		······································				
	KEY TO	ABBREVIATIONS		Comments		
SAMPLE TYP		ACTIVITY	RESPIRATOR			
HEX = heps subsust EXC FB = field blank IWA	C = excursion L = inside work eres	REM = removal: CLN = clean-up GLBG = glovebeg WLO = waste load-out	HM = half mask PF = full face P = powered APR = air puritying reap.	Sampled by	Date	8/25/20.

LLP-PRECISION000272	- 1	_	
P-PRECISION00027		г	
P-PRECISION00027		Г	
RECISION00027		τ	Į
RECISION00027		1	
RECISION00027		τ	Į
ECISION00027		ス	
3SION00027		П	
SION00027	1	C	)
ON00027		U	)
N00027	1	Ξ	
N00027	1	C	)
00027	1	_	,
0027	-	=	
)027	-	⊂	7
127	1	C	
$\sim$	1	c	١
	1	$\bar{\ }$	ì
N.	-	_	j
	1	N	١



### **ASBESTOS** AIR MONITORING REPORT

Date	8/26/2011
Client	
Project	
Project No	)
Applications	

		,	DESCRIPTIVE INFO	· · · · · · · · · · · · · · · · · · ·	Analytical Method		
SAMPLE I.D.	SAMPLE TYPE	WORKERS NAME	SOCIAL SECURITY #	LOCATION	ACTIVITY	RESPIRATOR TYPE	
82611 - 01B	BGD			Toside Builling Southerd by Conter of Stanling	Burl		
82611 - OZB	BGD			Westside of Property C Westside Gate			
82611 - 03B	BGD			South and of Property New Center of South			
82611 O4B	BGD			Eastside in the Southend			
82611-058	BGD			Eastside of Proporty Near Center of Fastsis	le		
82611 - 06B	Ben			Southside of Decon Aren			
82611 - 073	BG D			Northend of Property East of Office Build	+-7		
82611 - 083	FB			Field Blank			
						1	
						1	

**ANALYTICAL INFORMATION** 

SAMPLE I.D.	PUMP #	CALIB.	FLOW RATE	(L/min)	RU	NNING TIME	(min)	VOLUME	FIBERS/	FIBERS/	LOQ	PiBER/om <sup>a</sup>
OMMPLS ID.	COMP #	BEGINNING	END	AVERAGE	START	STOP	DURATION	(Liters)	FIELDS	mm² (Blank Carr)	FIBERS/	(Blank Corr)
82611 - 01B	49	2.0	20	2.0	0730	1335	365	7.30				
82611 - OBB	. 20	2.0	20	2.0	0732	1338	366	732				
8,2611- 033	. 54	2.0	2.0	2.0	0735	1340	365	730				
82611- OB	99	2.0	2.0	2.0	0737	1342	365	730				I
88611 - OSB	81	2.0	2.0	2.0	0740	1344	364	728				
82611 - 063	79	2.0	2.0	2.0	0744	1345	361	722				
82611 - 07B	Poz	2.0	2.0	2.0	0747	1350	363	726				
82611-08B	NA	NA	NA	NA	NA							
												<del>                                     </del>
· ·									_			

		KEY TO ABBREVIATIONS		Comments	
SAMPLE	TYPE	ACTIVITY	RESPIRATOR		
PRS = personal HEX = heps axhaust FB = field blank	FC = final clearance BXC = excursion IWA = inside work area	FIEM = removel OLN = clean-up GLSG = glovebag Wh O = unints bank-(u))	HM = half mask PF = hill face P = powered APR = air purkying resp.	Sampled by	Date 8/21/2011



SMGT.BatchSMR.0207

# **BATCH / SAMPLE MANAGEMENT REPORT**

252489	Batch Number:		86	stomer No.: RCS4
Cleveland Trencher	Project:		Environmental Group	
	Project Number:	44122	Shakercrest Blvd wood OH	2812 S Beach
3 Day	TAT:	Page Materianna Transport		stomer Rep: SC
9/16/2011	Date/Time Rec'd:			stomer teep.
9/10/2011	Date Time Rec u.			
9/21/2011	Time/Date Due:	TEM NIOSH	Analysis:	f Samples: 8
EM NOB	То ТЕМ	To PLM NOE	RTP:	tials Signaling knowledgement
				ecial Instructions:
		nsn.com	rcsenvironmental@1	min Notes:
	ontamination. ination. ned and portion of filter ren ethod.	t possible cross contamints spilled possible cross g as samples possible contage.  Received.  the client's sample log.	ceived wet. ceived covered with dust ntainers damaged, conte received in the same ba uplete Chain of Custody uplete Sample Log Rece ntainer IDs do not match ound Time indicated. rep for TEM NIOSH 74 of submitted as required shipping requirements n	Samples re Samples re Sample cor Paperwork No / Incom No / Incom Sample cor No Turnare PCM Re-p Blank(s) no
rs Mislabelled: Samples Not Stamped:	Sample Log Stampe Sample Containers		ent ID Listed: ent Location Listed: oject ID Listed: mAround Time Listed: e Date Listed: te/Time Received Listed alysis Method Listed: mber of Samples Listed	Wrong Cli- Wrong Cli- Wrong Pro Wrong Tui Wrong Du Wrong Da Wrong An

JLLP-PRECISION000273

Copy: FE, JN, RS, S



# PRELIMINARY RESULTS Airborne Asbestos Analysis TEM NIOSH

9-21-11	11
	1.70

		12:20 PM	j
Client:	RCS Environmental Group	Project: Cleveland Trencher	,
	2812 Shakercrest Blvd.	Project No.:	
	Beachwood OH 44122	PCM Reprep(y/n) y	_
Client No.:	RCS486	Turn-Around Time: 3 Day	
Client Conta	icts:	Laboratory Contacts:	_
Contacts:	Mike Schmidt	Contacts: Frank E. Ehrenfeld III	

Phone: Fax: Cell/Pager: E-Mail:	0 216-378-0997 0		Phone: Fax: Cell/Pager: E-Mail:	Fax: (856) 231-9818 Cell/Pager: (856) 727-8904				
Chain of Cus			Date:		Time:			
Samples Rec'd		DMD	Date:	9/16/11	Time:			

#### 

# Summary Data Transmission Electron Microscopy NIOSH 7402

Client	IATL	Volume	Comments	1 Results	<sup>2</sup> Results	3 Results
Sample ID #	Sample ID #	(L)	Comments	f/mm²	f/cc	f/cc
082611-01B	4429708	1522	None Detected	< 11	< 0.0028	< 0.0028
082611-02B	4429709	1520	None Detected	< 11	< 0.0028	< 0.0028
082611-03B	4429710	1514	None Detected	< 11	< 0.0028	< 0.0028
082611-04B	4429711	1502	None Detected	< 11	< 0.0028	< 0.0028
082611-05B	4429712	1500	None Detected	< 11	< 0.0028	< 0.0028
082611-06B	4429713	1490	None Detected	< 11	< 0.0028	< 0.0028
082611-07B	4429714	1486	None Detected	< 11	< 0.0028	< 0.0028
082611-08B	4429715	FB	None Detected	< 9.62	< NA	< NA
						<b> </b>
<u> </u>		<u> </u>		+	-	-
					<del>                                     </del>	
· · · · · · · · · · · · · · · · · · ·				<del></del>		

1 - Total Asbestos Fibers in relation to area analyzed. 2 - Total Asbestos Fibers	Grid Box #:	7170
of all sizes as a function of the volume of air sampled. 3 - Same as for 2 for		
fibers $\geq$ 5.0 $\mu m$ in length.	Instrument (I, II):	I

These preliminary results are issued by IATL to expedite procedures by the clients based upon the above data. IATL assumes that all of the sampling methods and data upon which these results are based, has been accurately supplied by the client. These results may not have been reviewed by the Laboratory Director. Final Certificates of Analysis will follow these preliminary results. The signed COAs are to be considered the official results.

TEM NIOSH Prelim 001

Samples Analyzed:

Preliminary Results Faxed:

Preliminary Results E-Mail:

# IATL International Asbestos Testing Laboratories

## **TEM Air Sample Worksheet**

lient Nam		RCS Environ	mental Group			sis Date:		IATL Sample #:	442970
lient Proje		2015		l	09/2	21/11		Client Sample #:	082611-011
ample Typ		PCM Reprep	)					IATL Grid Box #:	
C Submit							·	Grid Archive ID #:	A
	croscope ID:			Dia. (mm²):	25			Magnification:	20,000X
	achi H600AE			Area (mm²):	385				
EVEX	I- EDXA Sys	tem		Filter Type: Size (μm):			Acc	celerating Voltage:	100KeV
			THE TOL	- 512υ (μπη.			<del></del>	<del></del>	
· · · · · · · · ·			Grid Opening:	0.115	mm	Volume	of Air Sampled:	1522	Liters
			opening Area:		mm²	10,41,10	orran banquos.	1022	Liters
	Grid C	Openings Read		7	7	Analy	tical Sensitivity.	11.0	f⁄mm²
		Total A	rea Analyzed:	0.091	mm²	Minimum !	Detection Limit:	0.0028	f/cc (0.003)
•	Γotal Asbest	os Structures:	NSI		_	Non-Asb	estos Structures:	NSD	
		0.5 - 5.0 μm:	NSI		•			_ <del></del>	
		>5.0µm:	NSI		t/mm²		Non Ashantan	< 11.0	Pl 2
		Asbestos: Asbestos:		11.0 0.0028	f/ec		Non-Asbestos: Non-Asbestos:		f/mm² f/cc
	<del> </del>								<del></del>
						Analysis Data	1		
Grid	Fiber	Structure F	1 Length	<sup>2</sup> Length	<sup>3</sup> Diameter				Comments /
Opening	Number	BMC	⊥engm ≤ 5.0 μm	> 5.0 µm	> 0.25 µm	* Chrysotile	**Amphibole	***Non-Asbestos	J
ID		1.7070			<u> </u>				EDS ID
<u>B1</u>		NSD				· · · · · · · · · · · · · · · · · · ·			
B2		NSD			-				
B3		NSD			*		<del>                                     </del>		
B4 B5		NSD NSD					1		
B6		NSD			<del>                                     </del>				
В0 В7		NSD							
		1100							
		<del> </del>			<del> </del>				
Total:	NSD	<u></u>	0	0	<u> </u>	0	0	0	<u> </u>
			nd EDXA for each					Prep Quality:	
	-	-	reflections (002,		), 220, 200)			Dissolution	GOOD
	- '	obtained Y/N). P	rint-out EDS and	l attach.				Carbon Film	GOOD
	rize by EDS Siber Length	id 3 fiber diamete	er (um)		SEE BEVEDS	e: Fiber orien	TATION MAP	Loading	1%
•	•	Mantaid cault C m	sı (hm)		DEE KE YEKO	L THE CREA	71771011 MUE	A1 170	CVT
Comments:							<u>.</u>	Analyzed By	
								Reviewed By:	
									/_hi

T	Λ	TI	International	Asbestos
1.	a	. 1 1/	Testing Labor	atories

Client Name Client Proje Sample Typ QC Submite	et #: e:	RCS Environ PCM Repre	mental Group		09/21/11 C			IATL Sample #: Client Sample #: IATL Grid Box #: Grid Archive ID #;	082611-02 717
Electron Mic	roscope ID:		Filter	Dia. (mm²):	25			Magnification:	20,000X
I <u>Hitachi H600AB, 542-47-3</u> Effective Area (mm²) EVEX-EDXA System Filter Type Filter Pore Size (μm)			385 MCE 0.8		Ac	celerating Voltage:	ŕ		
		Grid	Grid Opening:	0.013	mm²		of Air Sampled:		Liters
Grid Openings Read / (Required): 7 Total Area Analyzed: 0.091				7 mm²		tical Sensitivity: Detection Limit:		f/mm² f/ec (0.003)	
		os Structures: 0.5 - 5.0 μm: >5.0μm:	NS NS	D D	- - - 	Non-Asbe	estos Structures:	NSD	
		Asbestos:		0.0028	f/mm² f/cc		Non-Asbestos: Non-Asbestos:		f/mm² f/cc
						Analysis Data	ı:		•
Grid Opening ID	Fiber Number	Structure FBMC	¹ Length ≤ 5.0 μm	<sup>2</sup> Length > 5.0 μm	<sup>3</sup> Diameter > 0.25 μm	Chrysotile	**Amphibole	***Non-Asbestos	Comments / Micrograph / EDS ID
A5 D1		NSD	···						<u> </u>
D2		NSD		Ī					
D3		NSD					_	<del></del>	
D4		NSD			1				
D5		NSD		ļ <del></del>	f" '			<del></del>	<u> </u>
D6 D7		NSD NSD		<del> </del>				_	
D/		1100					<del> </del>		
					1				
		i	<del>-</del> -						
	·								
	·						<u> </u>		
	<del></del>	<del> </del>		<b></b>	<del> </del>		<del>                                     </del>		<del> </del>
							<del> </del>		
Total:	NSD		0	0		0	0	0	
Must con	firm by Morph	ology, SAED, at	d EDXA for eac	h suspect asbes	tos fiber			Prep Quality:	
		nt Chrysotile DP		_			•	Dissolution	GOOD
	-	obtained Y/N). P			•			Carbon Film	GOOD
	rize by EDS					an pose	TTTS 1999 - 1999	Loading	1%
2 Record F	iber Length an	d 3 fiber diamete	r (μm)		SEE REVER	SE: FIBER OR	ENTATION MA	AP	
omments:						<u>.</u>	_	Analyzed By:	CL
								Reviewed By:	

T	A	T	T	Interna	tional	Asbestos
1.	7	T	Ŀ	Testing	Labora	atories

Client Name Client Proje Sample Typ QC Submitt	ent Project #: 09/21/11 aple Type: PCM Reprep Submittal					IATL Sample #: Client Sample #: IATL Grid Box #: Grid Archive ID #:	4429710 082611-031 7170 AS		
Electron Mic	croscope ID:		Filter	Dia. (mm²):	25			Magnification:	20,000X
1 Hitachi H600AB, 542-47-3 Effective Area (mm²) EVEX- EDXA System Filter Type Filter Pore Size (μm)				Area (mm²): Filter Type:	385 MCE		Ac	celerating Voltage:	100KeV
			Grid Opening:	0.115	mm	Volume	of Air Sampled:	1514	Liters
			opening Area:		mm²		<del></del>	,	237015
	Grid (	penings Read	l / (Required):	7	7	Analyt	tical Sensitivity:	11.0	f/mm²
		Total Area Analyzed: 0.091 mm² Minimum Detection Limit:				0.0028	f/cc (0.003)		
Τ		s Structures:	NS		-	Non-Asbe	estos Structures:	NSD	
		- 0.5 - 5.0 μm: - >5.0μm:	NS NS		•				
		Asbestos:			- ઈmm¹		Non-Asbestos:	< 11.0	f/mm²
	Asbestos: $< 11.0$ f/mm Non-Asbestos: $< 0.0028$ f/ $\infty$ Non-Asbestos: Non-Asbestos:			f/cc					
							<del></del>		
						Analysis Data	l:	<u> </u>	
Grid Opening ID	Fiber Number	Structure FBMC	¹ Length ≤ 5.0 μm	<sup>2</sup> Length > 5.0 μm	<sup>3</sup> Diameter > 0.25 μm	Chrysotile	**Amphibole	***Non-Asbestos	Comments / Micrograph / EDS ID
A9 B1	<u> </u>	NSD					<u> </u>		
B2		NSD							
A3		NSD							
A4		NSD							
A5		NSD							
A6		NSD							
A7		NSD					<u>  .                                     </u>		
						·			
								<u></u>	
					<u> </u>		<u>L</u>		
Total:	NSD	<u> </u>	0	0		0	0	0	]
<ul> <li>Must cor</li> </ul>	nirm by Morph	ology, SAED, a	nd EDXA for eac	h suspect asbes	tos fiber			Prep Quality:	
Record v	isible prominer	nt Chrysotile DP	reflections (002	,004, 110, 130	, 220, 200)			Dissolution	GOOD
** Define A	mphibole (DP	obtained Y/N). I	Print-out EDS an	d attach.				Carbon Film	GOOD
	rize by EDS							Loading	1%
•	_	d 3 fiber diamet	ет (µm)		SEE REVER	SE: FIBER OR	JENTATION M.		CT.
Comments:								Analyzed By	
							<del></del>	_ Reviewed By	

3 of 8

Client Name		RCS Environmental Group Analysis Date:				IATL Sample #:	4429712		
Client Proje					09/	21/11	Client Sample #:	082611-05B	
Sample Typ		PCM Repre	)					IATL Grid Box #:	7170
QC Submitt	al							Orid Archive ID #:	B
	roscope ID: .chi H600AB	s, 542-47-3		Dia. (mm²): Area (mm²):	25 385			Magnification:	20,000X
	- EDXA Sys			Filter Type: e Size (μm):	MCE 0.8		Acc	celerating Voltage:	100KeV
		(	Grid Opening:	0.115	mm	Volume o	of Air Sampled:	1500	Liters
			opening Area:	0.013	mm²		s da de la		
	Grid	Openings Read		7	$\frac{7}{\text{mm}^2}$	=	ical Sensitivity	11.0	f/mm²
		Total A	rea Analyzed:	0.091	mm	Minimum L	Detection Limit:	0.0028	f/cc (0.003)
T		os Structures:	NS NS			Non-Asbe	stos Structures:	NSD	
		0.5 <b>-</b> 5.0 μm: _ >5.0μm:	NS NS		•				
		Asbestos:		11.0	f/mm <sup>*</sup>		Non-Asbestos:	< 11.0	f/mm²
		Asbestos:	<	0.0028	f/cc		Non-Asbestos:	< 0.0028	f/cc
		· · · · · · · · · · · · · · · · · · ·				Analysis Data	:	<u></u>	
Grid Opening ID	Fiber Number	Structure FBMC	<sup>1</sup> Length ≤ 5.0 μm	<sup>2</sup> Length > 5.0 μm	<sup>3</sup> Diameter > 0.25 μm	Chrysotile *	**Amphibole	***Non-Asbestos	Comments / Micrograph / EDS ID
B8 D1		NSD			<u> </u>		Ī		
D2		NSD							
D3		NSD							
D4		NSD							
D5		NSD							
D6		NSD			<u> </u>				
D7		NSD		<u> </u>	<del> </del>	<u> </u>			_
	<del> </del>				-				
		1.			<u> </u>			<u></u>	
·			·		<u> </u>			<u></u>	<u> </u>
	1		<del></del>	<del>  .</del>	<del>                                     </del>	<u> </u>			
<u>-</u>		<del>   </del>			1				1
Total:	NSD		0	0	<u> </u>	0	0	0	
* Must con	firm by Morph	iology, SAED, ai	nd EDXA for eac	h suspect asbes	tos tiber			Prep Quality:	
		nt Chrysotile DP		-				Dissolution	GOOD
** Define A	mphibole (DP	obtained Y/N). I	rint-out EDS an	d attach.				Carbon Film	GOOD
*** Characte	tize by EDS							Loading	<1%
1,2 Record I	iber Length ar	nd 3 fiber diamete	er (µm)		SEE REVER	SE; FIBER OR	IENTATION M.	AP	
Comments:								_ Analyzed By	CL
								Reviewed By	

Client Name: RCS Environmental Group		RCS Environ	mental Group		Analys	sis Date:		IATL Sample #:	442971
Client <b>P</b> roje	ect #:				09/2	21/11		Client Sample #:	082611-061
ample Typ	e:	PCM Repres	P					IATL Grid Box #:	717
C Submit	tal							Grid Archive ID#:	C
	croscope ID:	542.47.3		Dia. (mm²): Area (mm²):	25 385			Magnification:	20,000X
	K- EDXA Sys			Filter Type: re Size (µm):	MCE 0.8	<u>.</u>	Ao	celerating Voltage:	100KeV
			Grid Opening:		mm	Volume	of Air Sampled:	1490	Liters
			opening Area:		mm²	_			
	Grid C		1/(Required):		7	-	ical Sensitivity.		f/mm²
		Total A	rea Analyzed:	0.091	mm <sup>2</sup>	Minimum I	Detection Limit:	0.0028	f/cc (0.003)
							···		
7		s Structures: 0.5 - 5.0 µm:	NS NS			Non-Asbe	estos Structures:	NSD	
		5.0 μm:   >5.0μm:	NS		•	•			
		Asbestos:		11.0	1√mm¹		Non-Asbestos:	< 11.0	í/mm²
		Asbestos:		0.0028	f/cc		Non-Asbestos:	< 0.0028	f/cc
						Analysis Data	1.		
Grid			1	2	<u> </u>		· 		Comments /
Opening ID	Fiber Number	Structure FBMC	¹ Length ≤ 5.0 μm	<sup>2</sup> Length > 5.0 μm	<sup>3</sup> Diameter > 0.25 μm	Chrysotile *	**Amphibole	***Non-Asbestos	1
		<del></del>							
C1 E1		NSD							
E2_		NSD NSD							
E2		NSD							
E2 E3		NSD NSD							
E2 E3 E4		NSD NSD NSD							
E2 E3 E4 E5		NSD NSD NSD NSD							
E2 E3 E4 E5 E6		NSD NSD NSD NSD							
E2 E3 E4 E5 E6		NSD NSD NSD NSD							
E2 E3 E4 E5 E6		NSD NSD NSD NSD							
E2 E3 E4 E5 E6		NSD NSD NSD NSD							
E2 E3 E4 E5 E6		NSD NSD NSD NSD							
E2 E3 E4 E5 E6		NSD NSD NSD NSD							
E2 E3 E4 E5 E6		NSD NSD NSD NSD							
E2 E3 E4 E5 E6	NSD	NSD NSD NSD NSD	0	0		0	0	0	
E2 E3 E4 E5 E6 E7		NSD NSD NSD NSD NSD NSD	0 nd EDXA for eac		tos fiber	0	0	0 Prep Quality:	
E2 E3 E4 E5 E6 E7  Total:	nfirm by Morph	NSD NSD NSD NSD NSD NSD NSD		h suspect asbes		0	0		GOOD
E2 E3 E4 E5 E6 E7  Total:	nfirm by Morph	NSD NSD NSD NSD NSD NSD NSD NSD at Chrysotile DP	nd EDXA for eac	ch suspect asbes ,004, 110, 130,		0	0	Prep Quality:	GOOD
E2 E3 E4 E5 E6 E7  Total:  Must con Record to Define A	nfirm by Morph	NSD NSD NSD NSD NSD NSD NSD NSD at Chrysotile DP	nd EDXA for eac reflections (002	ch suspect asbes ,004, 110, 130,		0	0	Prep Quality: Dissolution	
E2 E3 E4 E5 E6 E7  Total:  Must con Record v Define A	nfirm by Morph visible promines amphibole (DP crize by EDS	NSD NSD NSD NSD NSD NSD NSD NSD at Chrysotile DP	nd EDXA for eac reflections (002 Print-out EDS and	ch suspect asbes ,004, 110, 130,	220, 200)		6  IENTATION M.	Prep Quality: Dissolution Carbon Film Loading	GOOD
E2 E3 E4 E5 E6 E7  Total:  Must con Record of Period Character  Character	nfirm by Morph visible promines amphibole (DP crize by EDS Fiber Length an	NSD NSD NSD NSD NSD NSD NSD NSD NSD ology, SAED, a	nd EDXA for eac reflections (002 Print-out EDS and	ch suspect asbes ,004, 110, 130,	220, 200)			Prep Quality: Dissolution Carbon Film Loading	GOOD 1%

6 of 8

# IATL International Asbestos Testing Laboratories

## **TEM Air Sample Worksheet**

Client Name: RCS Environmental Group Client Project #: Sample Type: PCM Reprep QC Submittal			09/21/11				IATL Sample #: Client Sample #: IATL Grid Box #: Grid Archive ID #:	082611-07E	
Electron Mic	roscope ID:		Filter	Dia. (mm²):	25			Magnification:	20,000X
J <u>Hitachi H600AB, 542-47-3</u> Effectiv EVEX- EDXA System			Effective	Area (mm²): Filter Type:	385 MCE		Ac	celerating Voltage:	100KeV
			Grid Opening:	e Size (μm): 0.115	0.8 mm	Volume	of Air Sampled:	1486	Liters
			opening Area:	0.013	mm²				•
	Grid (		l / (Required):		- , 7		tical Sensitivity:	11.0	f/111111 <sup>2</sup>
		Total A	rea Analyzed:	0.091	mm²	Minimum l	Detection Limit:	0.0028	f/cc (0.003)
		os Structures: 0.5 - 5.0 µm:	NS NS	D		Non-Asb	estos Structures:	NSD	
		>5.0µm:	NS		- f/mm¹		3.T A -14		m o
Asbestos: Asbestos:			0.0028	_1/mm f/cc		Non-Asbestos: Non-Asbestos:		f/mm² f/cc	
Grid	··· <u>·</u> ···			I .	T	Analysis Data	1: 	<u> </u>	Comments /
Opening ID	Fiber Number	Structure FBMC	¹ Length ≤5.0 μm	<sup>2</sup> Length > 5.0 μm	<sup>3</sup> Diameter > 0.25 μm	Chrysotile *	**Amphibole	***Non-Asbestos	Micrograph / EDS ID
C5 B1		NSD							
B2		NSD							
B3		NSD			<u> </u>		<del> </del>		
B4		NSD			<del> </del>			<u> </u>	
B5 .		NSD		-			l.		
B6 B7		NSD NSD			<del> </del>	<u> </u>	<del> </del>	<u></u>	
57		NSD			<u> </u>			<u>-</u>	
	- · <u>-</u>	<b>-</b>					"	<del></del>	
			<del></del>				1		
			<u> </u>						
							<u> </u>	<del></del>	
				<del> </del>	1		1	<u> </u>	<u> </u>
Total:	NSD		0	0		0	0	0	
Must cor	firm by Morpl	nology, SAED, as	nd EDXA for eac	h suspect asbes	stos fiber			Prep Quality:	
		-	reflections (002		, 220, 200)			Dissolution	GOOD
	-	obtained Y/N). I	Print-out EDS and	i attach.				Carbon Film	GOOD
	rize by EDS Ober Length ar	id 3 fiber diamete	er (um)		SEE REVER	SE FIRER OR	ENTATION M.	Loading AP	<1%
-	roes rengin gr	ra o most maineu	⊶ (μιιι)		۱۱۱۱۷ نای بیزان	al. Philippin			
Comments:							<u>.</u>	Analyzed By:	
								Reviewed By	:

7 of 8

T	A	TT	]	Internat	ional	Asbestos
L.	A		1	<b>Testing</b>	Labor	atories

Client Name Client Proje	ct #:	RCS Environmental Group PCM Reprep			09/21/11			IATL Sample #: Client Sample #:	082611-08
Sample Typ QC Submitt		PCM Repre	P				i	IATL Grid Box #: Grid Archive ID #:	
lectron Mic	roscope ID:		T721+	Dia. (mm²):	75	_		<u> </u>	
<u>I</u> <u>Hita</u>	chi H600AE	3, 542-47-3		Area (mm²):				Magnification;	20,000X
EVEX	-EDXA Sys	stern	Filter Por	Filter Type: e Size (μm):		_	Ac	celerating Voltage:	100KeV
			Grid Opening:	0.115	mm	Volume	of Air Sampled:	FB	Liters
Grid Opening Area: 0.013 Grid Openings Read / (Required): 8 Total Area Analyzed: 0.104			mm² (10)	Analy	tical Sensitivity:	9.6	f/mm²		
			mm²		Detection Limit:		f/∞ (0.003)		
Т		os Structures: 0.5 - 5.0 μm:	NS NS			Non-Asb	estos Structures:	NSD	-
		>5.0μm:	NS		-				
Asbestos:			9.6	<del>-</del>				_ f/mm²	
	_ <del>_</del> -	Asbestos:	<	NA	f/cc		Non-Asbestos:	< NA	I/cc
					1	Analysis Data	<b>1</b> ;		
Grid Opening ID	Fiber Number	Structure FBM C	¹ Length ≤ 5.0 μm	<sup>2</sup> Length > 5.0 μm	<sup>3</sup> Diameter > 0.25 μm	Chrysotile *	**Amphibole	***Non-Asbestos	Comments / Micrograph . EDS 1D
9 B1	··=	NSD				_		<u> </u>	
B2		NSD							
В3		NSD							
B4	·	NSD							
A2	·	NSD			<del> </del>	· · · · · · · · · · · · · · · · · · ·			
A3 A4	<del></del>	NSD NSD		<u> </u>	-				<del></del>
A5	<u>_</u>	NSD							
						_			
_	<u>-</u>	ļ			<del> </del>		<u> </u>		
	<del></del>			-	<u> </u>			<u> </u>	
		-		1	<del> </del>				
		+ -				<del></del>			
Total:	NSD		0	0		0	0	0	
Must con	firm by Morpl	nology, SAED, aı	ad EDXA for eac	h suspect asbes	stos fiber			Prep Quality:	
	-	nt Chrysotile DP			, 220, 200)			Dissolution	GOOD
	. ,	obtained Y/N). F	rint-out EDS and	l attach.				Carbon Film	GOOD
	rize by EDS Ther Length at	nd 3 fiber diamete	er (um)		SEE REVER	SE: FIBER OR	JENTATION M.	Loading AP	<1%
	Tonem en	J Moor wantibu	(P····y						
comments:								_ Analyzed By	
								_ Reviewed By	:

8 of 8

