PRECISION ENVIRONMENTAL INC.

36-15A 23rd Street
Long Island City, NY 11106
Tel: 718.383.2626 Fax: 718.383.7780
www.precision-enviro.com

September 2, 2015

Mr. Abdi Zarrabi
NYC School Construction Authority
30-30 Thomson Avenue
Long Island City, NY 11101

Re: Indoor Air Assessment at:
X475/John F. Kennedy HS - Bronx
99 Terrace View Avenue, Bronx, NY 10463
SCA IEH Job #:
SCA LLW #(s): 102781
Precision Project No. 2181-15-0191 – R2

Dear Mr. Zarrabi:

Precision Environmental Inc. (Precision) was retained by New York City School Construction Authority (SCA) to conduct an indoor air assessment within X475/John F. Kennedy HS – Bronx located at: 99 Terrace View Avenue, Bronx, NY 10463. This assessment was limited to visual inspection and real-time measurements (air sampling) for Airborne Particulate Matter (particulate matter less than 10 microns in diameter capable of being inhaled into the nose and throat) (APM-PM_{10}) and Total Volatile Organic Compounds (TVOC's). The scope of work was verbally communicated to Precision by SCA representatives Mr. Alex Lampert and Mr. Abdi Zarrabi on August 31, 2015. The assessment was performed on August 31, 2015.

Upon arrival at the school, Precision representatives Mr. Michael Parpounas and Ms. Daisy Nieves met with SCA representatives Mr. Abdi Zarrabi and Mr. Zbigniew Kowalski who verbally communicated the scope of work and escorted Precision throughout the school.

As a result, Precision collected a total of 117 indoor real-time measurements of APM-PM_{10} and TVOCs from randomly selected areas throughout the school. One outdoor measurement was also collected outside the school building in the parking lot by T-4. Precision collected the real-time measurements using a DustTrak II Aerosol Monitor, model 8532 manufactured by TSI for the APM-PM_{10} and RAE Systems, Inc. ppbRAE® photoionization detector (PID) for the TVOCs.

Currently, there are no regulatory standards for indoor air quality in non-industrial buildings, such as offices and schools. For the real-time data collected, Precision used the commonly accepted guidelines cited in the following publications:

- *Ventilation for Acceptable Indoor Air Quality (ASHRAE 62-1999)*, American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE);
- *Thermal Environmental Conditions for Human Occupancy (ASHRAE 55-1992);*
- *Industrial Hygienists Guide to Indoor Air Quality Investigations* (1993), American Industrial Hygiene Association (AIHA).

The table below lists target guidelines for the parameters that Precision evaluated during this investigation. Meeting one, some, or all of the listed values does not assure that acceptable indoor air quality will be achieved at all times.

INDOOR AIR QUALITY DATA AND
TARGET GUIDELINES FOR INDOOR AIR QUALITY PARAMETERS EVALUATED

Parameter	Limit/Range	Reference
Airborne Particulate Matter (PM_{10})	150 µg/m3 (24 hours)	EPA NAAQS
TVOCs	1000ppb (1ppm)	AIHA

EPA NAAQS = Environmental Protection Agency National Ambient Air Quality Standard
AIHA = American Industrial Hygiene Association

At the time of the site visit on August 31, 2015, Precision found/observed the following:

- All 117 real-time measurements of APM-PM_{10} obtained were below the EPA NAAQS guideline level of 150µg/m^3 (24 hour period). The indoor APM-PM_{10} concentration ranged between 6µg/m^3 and 126µg/m^3. The outdoor APM-PM_{10} concentration was 14µg/m^3.

- All 117 real-time measurements of TVOCs concentrations obtained were below the AIHA guideline of 1000ppb (1.0ppm). The indoor TVOCs concentration ranged between 0ppb and 741ppb. The outdoor TVOC concentration was 0ppb.

- Custodial cleaning was ongoing on all floors.

- Construction activities were taking place on the upper floors.

- Visible settle dust and/or construction related dust/debris were noted in most of the assessed areas. In general the upper floors had more visible dust and debris in comparison to the lower floors.

- Odors associated with painting and/or cleaning activities were noted throughout the assessed areas. In general the odors associated with paint were stronger on the lower floors with the 1st floor having the strongest paint odors. The strong odor on the 1st floor is attributed to the gym floor which was painted the day before.

Even though Precision found that all air quality measurements at the time of the assessment were below guideline levels, the settle dust/debris noted throughout the school when disturbed by normal school activities may adversely affect the indoor air quality. Therefore, Precision recommends the following:

1. Continue with the cleaning until all occupied areas of the school are thoroughly clean and free of visible dust and debris.

2. The clean-up should periodically be inspected by an environmental consultant to ensure the areas are properly cleaned and are free of any visible dust/debris.

3. Using both natural and mechanical means ventilate all areas in order to reduce/eliminate the odor conditions.

4. Construction work should implement all SCA dust control procedures.

5. Maintain construction work areas free of accumulated dust/debris.

6. Both custodial staff and construction personnel should use wet wipe methods and vacuum units equipped with HEPA filtration during cleaning at all times.

7. Interior surfaces should be maintained free of visible dust/debris.

8. Upon completion of the cleaning, perform a final visual inspection for settle dust and debris to ensure the areas are free of visible dust.

9. The cleaning and final visual inspection should be performed/completed prior to school opening.

10. A log should be kept of all indoor air quality issues including, but not limited to; aberrant odors, complaints of irritation of the eyes, etc…

All measurements obtained and their locations are listed on the attached Indoor Air Quality Direct Measurement Field Data Report.

Thank you for selecting Precision Environmental Inc for the provision of the referenced services. If you have any questions or require additional information or services please do not hesitate to call me at 718-383-2626.

Sincerely yours,
PRECISION ENVIRONMENTAL INC.

Michael Parpounas
Project Manager

Attachments: Indoor Air Quality Direct Measurement Field Data Report

PRECISION ENVIRONMENTAL INC.
36-15A 23rd Street, LIC, NY 11106
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INDOOR AIR QUALITY DIRECT MEASURMENT FIELD DATA REPORT

CLIENT INFORMATION

NAME: **NYC SCA**	
SERVICE ID:	LLW No.:
BUILDING NAME: **X475/JFK HS - Bronx**	
BUILDING ADDRESS: **99 Terrace View Avenue Bronx, NY 10463**	

PRECISION PROJECT INFORMATION

PROJECT NAME: **Limited Indoor Air Quality Assessment**
P.E. PROJECT No.: **2181-15-0191**
INDUSTRIAL HYGIENIST NAME: **Michael Parpounas/Daisy Nieves**
SAMPLING AREAS: **Representative Areas Throughout**

DIRECT MEASUREMENT FIELD DATA

LOCATION	NUMBER OF OCCUPANTS	TIME	RESPIRABLE PARTICULATES PM_{10} ($\mu g/m^3$)	TVOCs (ppb)
Outdoors - Parking Lot by T-4		Start 16:50	14	0
7th Floor - Hallway by Rm 732			65	0
Hallway by Rm 728			67	0
Room 728			45	0
Room 722			126	23
Hallway by Cafeteria			32	0
Cafeteria			57	0
Hallway by 752			11	0
Room 750			29	0
Rm 748A			20	0

Guideline levels AIHA	TOTAL VOLATILE ORGANIC COMPOUNDS (TVOCs)	RESPIRABLE PARTICULATES PM_{10}
	1,000 ppb (1 ppm)	150 $\mu g/m^3$ 24 hrs average

☐ See the back of this page for comments

Instruments used: ☑ Dust-Trak® Aerosol Monitor Model 8520, manufactured by TSI, Inc. for RP
☑ RAE Systems, Inc. ppbRAE® 3000 photoionization detector (PID) for TVOCs
☐ Other: _____

Signature: _____ **Date:** 8/31/15

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PRECISION PROJECT INFORMATION

DIRECT MEASUREMENT FIELD DATA

LOCATION	NUMBER OF OCCUPANTS	TIME	RESPIRABLE PARTICULATES PM_{10} ($\mu g/m^3$)	TVOCs (ppb)
8th Floor Stairs G&H			31	0
Room 838			50	0
Hallway by 832			44	0
Room 828			29	36
Hallway by 826			41	0
Hallway by 816			48	39
Cafeteria			9	0
Room 808			29	0
Hallway by 876			29	0
Hallway by 866			44	22

Guideline levels AIHA	TOTAL VOLATILE ORGANIC COMPOUNDS (TVOCs)	RESPIRABLE PARTICULATES PM_{10}
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DIRECT MEASUREMENT FIELD DATA

LOCATION	NUMBER OF OCCUPANTS	TIME	RESPIRABLE PARTICULATES PM_{10} ($\mu g/m^3$)	TVOCs (ppb)
8th Floor - Mens Room 852B			52	0
Room 850			43	0
Hallway by 848			54	0
Room 846			53	0
Room 844			7	0
6th Floor Room 606			25	0
Room 604			10	0
Room 676			23	0
Hallway by 676			18	0
Stairs A2B			18	0

Guideline levels AIHA	TOTAL VOLATILE ORGANIC COMPOUNDS (TVOCs)	RESPIRABLE PARTICULATES PM_{10}
	1,000 ppb (1 ppm)	150 $\mu g/m^3$ 24 hrs average

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LOCATION	NUMBER OF OCCUPANTS	TIME	RESPIRABLE PARTICULATES PM_{10} ($\mu g/m^3$)	TVOCs (ppb)
6th Floor - Room 666			35	0
- Hallway by 654			14	0
- Room 654B			22	0
- Hallway by Exit F+E			37	0
5th Floor - Staircase Landing F+E			55	0
- Room 548			37	0
- Hallway by 548			32	0
- Room 544			38	0
- Room 526			15	0
- Room 506			34	0

Guideline levels AIHA	TOTAL VOLATILE ORGANIC COMPOUNDS (TVOCs)	RESPIRABLE PARTICULATES PM_{10}
	1,000 ppb (1 ppm)	150 $\mu g/m^3$ 24 hrs average

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DIRECT MEASUREMENT FIELD DATA

LOCATION	NUMBER OF OCCUPANTS	TIME	RESPIRABLE PARTICULATES PM_{10} ($\mu g/m^3$)	TVOCs (ppb)
5th Floor - Hallway by Room 506			30	0
- Room 576			28	0
- Hallway by Room 576			30	0
- Room 572			42	0
- Hallway by Room 563			36	0
- Room 560			33	0
- Staircase landing C+D			27	0
4th Floor - Staircase Landing C+D			29	0
- Hallway by Exit C+D			29	0
- Room 460			40	0

Guideline levels AIHA	TOTAL VOLATILE ORGANIC COMPOUNDS (TVOCs)	RESPIRABLE PARTICULATES PM_{10}
	1,000 ppb (1 ppm)	150 $\mu g/m^3$ 24 hrs average

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4th Floor - Hallway by Room 458B			30	11
- Room 454			28	156
- Room 452			33	56
- Room 442			28	0
- Hallway by Exit G+H			31	0
- Room 444 (Suite)			33	0
- Hallway by Room 432			21	0
- Room 432			32	0
- Room 484			23	169
- Room 426			19	0

Guideline levels AIHA	TOTAL VOLATILE ORGANIC COMPOUNDS (TVOCs)	RESPIRABLE PARTICULATES PM_{10}
	1,000 ppb (1 ppm)	150 $\mu g/m^3$ 24 hrs average

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LOCATION	NUMBER OF OCCUPANTS	TIME	RESPIRABLE PARTICULATES PM_{10} ($\mu g/m^3$)	TVOCs (ppb)
4th Floor - Hallway by 422			20	4
- Room 422			37	0
3rd Floor - Staircase landing C+D			30	11
- Hallway by Exit C+D			25	0
- Hallway by Room 358			29	0
- Room 358			27	0
- Hallway by Room 354			23	0
- Room 354			28	0
- Room 344A			36	11
- Hallway by Room 344A			31	22

Guideline levels AIHA	TOTAL VOLATILE ORGANIC COMPOUNDS (TVOCs)	RESPIRABLE PARTICULATES PM_{10}
	1,000 ppb (1 ppm)	150 $\mu g/m^3$ 24 hrs average

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LOCATION	NUMBER OF OCCUPANTS	TIME	RESPIRABLE PARTICULATES PM_{10} ($\mu g/m^3$)	TVOCs (ppb)
3rd floor - Hallway by 338			25	0
- Room 338			35	0
- Room 334			27	0
- Hallway by Room 334			24	0
- Room 324			24	0
- Hallway by 316			10	0
- Cafeteria 316			6	0
- Hallway by Room 309			21	0
- Room 309			26	0
- Room 304			25	0

Guideline levels AIHA	TOTAL VOLATILE ORGANIC COMPOUNDS (TVOCs)	RESPIRABLE PARTICULATES PM_{10}
	1,000 ppb (1 ppm)	150 $\mu g/m^3$ 24 hrs average

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PRECISION PROJECT INFORMATION

DIRECT MEASUREMENT FIELD DATA

LOCATION	NUMBER OF OCCUPANTS	TIME	RESPIRABLE PARTICULATES PM_{10} ($\mu g/m^3$)	TVOCs (ppb)
3rd Floor - Room 376			33	0
- Hallway by Exits A+B			27	0
- Room 370			30	0
2nd Floor - Staircase landing C+D			36	0
- Hallway by Exit C+D			34	11
- Hallway by 256			32	44
- Room 256			35	22
- Hallway by Town Hall B			34	22
- Town Hall A			35	56
Hallway by Room 238			26	67

Guideline levels AIHA	TOTAL VOLATILE ORGANIC COMPOUNDS (TVOCs)	RESPIRABLE PARTICULATES PM_{10}
	1,000 ppb (1 ppm)	150 $\mu g/m^3$ 24 hrs average

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LOCATION	NUMBER OF OCCUPANTS	TIME	RESPIRABLE PARTICULATES PM_{10} ($\mu g/m^3$)	TVOCs (ppb)
2nd Floor - Room 238			26	78
- Hallway by 228			33	0
- Room 228			39	22
- Room 224			21	22
- Hallway by Exit E+F			30	0
- Girls locker Room 212			6	11
- Hallway by Room 264			27	0
- Room 264			29	56
- Room 260			34	33
1st Floor - Staircase landing C+D			32	0

Guideline levels AIHA	TOTAL VOLATILE ORGANIC COMPOUNDS (TVOCs)	RESPIRABLE PARTICULATES PM_{10}
	1,000 ppb (1 ppm)	150 $\mu g/m^3$ 24 hrs average

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DIRECT MEASUREMENT FIELD DATA

LOCATION	NUMBER OF OCCUPANTS	TIME	RESPIRABLE PARTICULATES PM_{10} ($\mu g/m^3$)	TVOCs (ppb)
1st Floor - Hallway by Exit C+D			37	213
- Hallway by Health Center			34	398
- Girls Bathroom A159			27	426
- Corridor by Townhall B			27	348
- Main Auditorium			28	528
- Hallway by Campus Library			29	455
- Campus Library			10	561
- Hallway by 140			21	460
Room 140			37	258
Room 144			37	178

Guideline levels AIHA	TOTAL VOLATILE ORGANIC COMPOUNDS (TVOCs)	RESPIRABLE PARTICULATES PM_{10}
	1,000 ppb (1 ppm)	150 $\mu g/m^3$ 24 hrs average

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LOCATION	NUMBER OF OCCUPANTS	TIME	RESPIRABLE PARTICULATES PM_{10} ($\mu g/m^3$)	TVOCs (ppb)
1st Floor - Room A148			29	550
↓ - Gym			23	MH1
↓ - Hallway by 104			27	258
↓ - Room 102			24	11
T-4 - by windows/ent.			16	0
T-3 - Center by windows			18	11
T-2 - by ent. door Right			20	0
T-1 - by ent. door Left.		21:20	18	22

Guideline levels AIHA	TOTAL VOLATILE ORGANIC COMPOUNDS (TVOCs)	RESPIRABLE PARTICULATES PM_{10}
	1,000 ppb (1 ppm)	150 $\mu g/m^3$ 24 hrs average

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☐ Other: _____

Signature: _____ **Date:** 8/31/15

WBE Certified
www.CEScenter.com

Creative Environment Solutions Corp.
39 West 37th Street, 14th Floor, New York, NY 10018
Phone: 212.290.6323 Fax: 212.290.6325
LICENSED & APPROVED by NYS DOH/DOL/DOS, NYC DOB/DEP, FDNY, PIE

LIMITED INSPECTION FOR INTERIOR LEAD-BASED PAINT ON WALLS

Site Location:

John F. Kennedy HS @ X475
99 Terrace View Avenue
Bronx, NY 10463

DESIGN #: D014483
LLW #: 077209
SCA Job #: 49287
SCOPE OF WORK:
"Emergency Sampling"

Prepared for:

NEW YORK CITY SCHOOL CONSTRUCTION AUTHORITY
30-30 Thomson Avenue
Long Island City, NY 11101

Prepared by:

CREATIVE ENVIRONMENT SOLUTIONS CORP. (CES)
39 West 37th Street, 14th Floor
New York, New York 10018

CES PROJECT NO. 13-SCA-066.25

Submitted: September 1, 2015

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ATTACHMENTS

1.0 BACKGROUND

Creative Environment Solutions Corp. (CES) was retained by NYCSCA/IEH to conduct a limited survey for the presence of lead-based paint (LBP) at the following building:

School(s):	John F. Kennedy H.S
Facility:	X475
Address:	99 Terrace View Avenue
District:	10
Borough of:	Bronx
Block #:	2215
Lot #:	80
Original Building Year:	1970
Design #	D014483
SCA Job #:	49287
LLW #:	077209
Scope of Work:	"Emergency Stabilization"

The inspection was conducted by:

Mark McCormack
Certified Lead-Based Paint Professional # NY-I-I155496-1, Exp.:07/28/2018

Site Visit(s): August 28, 2015

Report Date: September 1, 2015

2.0 SCOPE OF WORK

A limited XRF lead-based paint inspection was performed at the above referenced location on August 28, of 2015 to determine if lead paint is present on the painted walls, as specified by the SCA demolition plans provided to CES' Certified Lead Inspector on site.

This testing should not be considered a comprehensive lead paint survey.

3.0 SITE DESCRIPTION & CONDITIONS

There are currently eight (8) schools located in building X475; the building is known as "John F. Kennedy High School."

Bronx Engineering and Technology Academy (X213) utilizes the 5th and 6th floors of the building. The school has a student population of 450 kids from the 9th grade to 12th grade.

Bronx School of Law and Finance (X284) utilizes the 6th, 7th and 8th floors of the building. The school has a student population of 450 kids from the 9th grade to 12th grade.

English Languages Learners and Int. Support Prep Academy (X397) utilizes the 4th and 5th floors of the building.

Bronx Theatre High School (X546) utilizes the 6th and 7th floors of the building.

Young Adult Borough Center (X504), which is associated with the Bronx Theatre High School, also utilizes the 6th and 7th floors of the building.

Marble Hill High School for International Studies (X477) utilizes the 6th and 8th floors of the building. The student population is 460 students from 9th grade to the 12th grade.

New Visions Charter High School Advanced Math and Science (X539) utilize the 2nd and 3rd floors of the building. The school currently only has 9th grade classes, and is adding a grade every year.

New Visions Charter High School for Humanities (X553) utilizes the 2nd and 3rd floors of the building. The school currently only has 9th grade classes, and is adding a grade every year.

The original building was built in 1970. The structure was constructed of steel framing and reinforced concrete. The exterior of the building is composed of concrete masonry units and brick. The building has 8 floors with a basement, sub-basement and penthouse. There is a two-story structure that contains an auditorium on the north side of the building. There is also a two story building that contains two gymnasiums on the south side of the building.

4.0 LEAD-BASED PAINT TESTING METHODS

Mark McCormack, (Certified Lead-Based Paint Professional # NY-I-I155496-1, Exp.:07/28/2018), utilized an Innov-X System Alpha Series X-Ray Fluorescence Spectrometer (XRF) (model I-3000, serial 11695). Calibration XRF readings were conducted at the office, at the beginning of the inspection on-site, and at the end of this inspection using the National Institute of Standards and Technology (NIST) Standard Reference Material 2573 that was provided by the XRF manufacturer.

For the interior inspection, XRF readings were taken from all upper and lower walls consisting of a single substrate, and, when applicable, colors or wall trims were used as the boundary between the upper and lower walls. If there is no such division, the Inspector collected the shots from the lower walls (from floor to eight feet) and the upper walls (above eight feet).

"Lead Based Paint" is defined by the U.S. Department of Housing and Urban Development (HUD) as a dried paint film containing equal to or greater than 1.0 milligrams of lead per square centimeter (mg/cm^2).

Negative XRF readings or readings of 0.0 and 0.1 mg/cm^2 are statistically insignificant and are considered zero for lead. Readings of 1.0 mg/cm^2 or greater are considered positive for lead. The "Action Level" for this inspection is 1.0 mg/cm^2.

5.0 TEST RESULTS/CONCLUSIONS

During the inspection of the interior walls in the classrooms, bathrooms and hallways, positive lead-based paint readings were not observed.

It was observed during the inspection that the interior/exterior painted surfaces were intact.

6.0 LIMITATIONS

CES's testing results are applicable only to the time that testing was conducted and cannot be considered applicable to future conditions. CES cannot offer a judgment on whether lead is or is not present on surfaces that were not tested. Under SCA protocol and Section S01900 any painted surfaces not tested for lead-based paint, should be assumed lead-based paint.

Some surfaces that tested Non Lead-Based Paint for lead may in fact contain small amounts of lead that can be liberated as dust during renovation activities. CES suggests that efforts be made to suppress and contain dust whenever painted surfaces are disturbed, regardless of whether those surfaces tested Lead-Based Paint with XRF testing.

Since CES cannot offer a judgment on whether lead is present or not on painted surfaces not tested during the inspection, and in accordance with Section S01900 and SCA Protocol, ALL UNTESTED SURFACES MUST BE ASSUMED TO CONTAIN LEAD.

7.0 REPORT CERTIFICATIONS

CES certifies that the information contained herein is based on the physical and visual inspections conducted by CES and data collected during the inspection survey.

The Lead-Based Paint Survey described herein was conducted by the undersigned, of Creative Environment Solutions Corp. (CES). CES's investigation consisted solely of the activities described in the NYC SCA Survey Proceed Order.

Lead-Based Paint Survey Performed by:

09/01/15
Mark McCormack Date
Certified Lead-Based Paint Professional # NY-I-I155496-1, Exp.: 07/28/2018

Report Written By:

09/01/15
Mark McCormack Date
Certified Lead-Based Paint Professional # NY-I-I155496-1, Exp.: 07/28/2018

Report QA/QC and submitted by:

09/01/15
Dmitry Khusidman Date
Project Manager
Certified Lead-Based Paint Professional # NY-R-22716-2, Exp.:07/27/2016

8.0 ATTACHMENT A: XRF RESULTS

XRF Shot Number	Date	Time	Sample Location	Building Component	Wall / Elevation	Substrate	Paint Condition	XRF Reading (mg/cm²)	Final Results
1	28-Aug-15	13:15:55	Standardization	NA	NA	NA	NA	-0.039967	PASS
2	28-Aug-15	13:16:36	Office Calibration	NA	NA	NA	NA	0.07	NA
3	28-Aug-15	13:17:00	Office Calibration	NA	NA	NA	NA	0.06	NA
4	28-Aug-15	13:17:12	Office Calibration	NA	NA	NA	NA	0.01	NA
5	28-Aug-15	13:17:23	Office Calibration	NA	NA	NA	NA	1.02	NA
6	28-Aug-15	13:17:55	Office Calibration	NA	NA	NA	NA	1.08	NA
7	28-Aug-15	13:18:11	Office Calibration	NA	NA	NA	NA	1.01	NA
8	28-Aug-15	15:27:03	Standardization	NA	NA	NA	NA	-0.399940	PASS
9	28-Aug-15	15:27:16	X075 Calibration	NA	NA	NA	NA	0.09	NA
10	28-Aug-15	15:27:58	X075 Calibration	NA	NA	NA	NA	0.02	NA
11	28-Aug-15	15:28:13	X075 Calibration	NA	NA	NA	NA	0.07	NA

XRF Shot Number	Date	Time	Sample Location	Building Component	Wall / Elevation	Substrate	Paint Condition	XRF Reading (mg/cm²)	Final Results
12	28-Aug-15	15:28:31	X075 Calibration	NA	NA	NA	NA	1.02	NA
13	28-Aug-15	15:28:48	X075 Calibration	NA	NA	NA	NA	1.10	NA
14	28-Aug-15	15:29:09	X075 Calibration	NA	NA	NA	NA	1.02	NA
19	28-Aug-15	15:32:59	Room 622	Wall Lower	A	Plaster	I	0.00	Non Lead-Based Paint
20	28-Aug-15	15:33:24	Room 622	Wall Upper	A	Plaster	I	0.02	Non Lead-Based Paint
26	28-Aug-15	15:36:41	Room 622	Wall Lower	B	Plaster	I	0.00	Non Lead-Based Paint
27	28-Aug-15	15:37:11	Room 622	Wall Upper	B	Plaster	I	0.01	Non Lead-Based Paint
32	28-Aug-15	15:39:39	Room 622	Wall Lower	D	Plaster	I	0.00	Non Lead-Based Paint
33	28-Aug-15	15:40:26	Room 622	Wall Upper	D	Plaster	I	0.00	Non Lead-Based Paint
40	28-Aug-15	15:44:05	Room 626	Wall Lower	A	Plaster	I	0.00	Non Lead-Based Paint
41	28-Aug-15	15:44:27	Room 626	Wall Upper	A	Plaster	I	0.01	Non Lead-Based Paint

XRF Shot Number	Date	Time	Sample Location	Building Component	Wall / Elevation	Substrate	Paint Condition	XRF Reading (mg/cm²)	Final Results
45	28-Aug-15	15:47:18	Room 626	Wall Lower	B	Plaster	I	0.05	Non Lead-Based Paint
46	28-Aug-15	15:47:42	Room 626	Wall Upper	B	Plaster	I	0.05	Non Lead-Based Paint
48	28-Aug-15	15:49:58	Room 626	Wall Lower	C	Plaster	I	0.06	Non Lead-Based Paint
49	28-Aug-15	15:50:11	Room 626	Wall Upper	C	Plaster	I	0.00	Non Lead-Based Paint
53	28-Aug-15	16:06:49	Room 626	Wall Lower	D	Plaster	I	0.00	Non Lead-Based Paint
54	28-Aug-15	16:07:06	Room 626	Wall Upper	D	Plaster	I	0.13	Non Lead-Based Paint
60	28-Aug-15	16:08:53	Room 628	Wall Lower	A	Plaster	I	0.00	Non Lead-Based Paint
61	28-Aug-15	16:09:08	Room 628	Wall Upper	A	Plaster	I	1.00	Non Lead-Based Paint
64	28-Aug-15	16:10:26	Room 628	Wall Lower	B	Plaster	I	0.00	Non Lead-Based Paint
65	28-Aug-15	16:11:15	Room 628	Wall Upper	B	Plaster	I	0.01	Non Lead-Based Paint
67	28-Aug-15	16:12:07	Room 628	Wall Lower	C	Plaster	I	0.00	Non Lead-Based Paint

XRF Shot Number	Date	Time	Sample Location	Building Component	Wall / Elevation	Substrate	Paint Condition	XRF Reading (mg/cm²)	Final Results
68	28-Aug-15	16:12:35	Room 628	Wall Upper	C	Plaster	I	0.03	Non Lead-Based Paint
75	28-Aug-15	16:18:41	Room 628	Wall Lower	D	Plaster	I	0.00	Non Lead-Based Paint
76	28-Aug-15	16:19:04	Room 628	Wall Upper	D	Plaster	I	0.00	Non Lead-Based Paint
82	28-Aug-15	16:23:19	Room 630	Wall Lower	A	Plaster	I	0.00	Non Lead-Based Paint
83	28-Aug-15	16:24:28	Room 630	Wall Upper	A	Plaster	I	0.00	Non Lead-Based Paint
87	28-Aug-15	16:36:58	Room 630	Wall Lower	B	Plaster	I	0.00	Non Lead-Based Paint
88	28-Aug-15	16:37:14	Room 630	Wall Upper	B	Plaster	I	0.02	Non Lead-Based Paint
90	28-Aug-15	16:38:28	Room 630	Wall Lower	C	Plaster	I	0.00	Non Lead-Based Paint
91	28-Aug-15	16:39:14	Room 630	Wall Upper	C	Plaster	I	0.00	Non Lead-Based Paint
95	28-Aug-15	16:42:14	Room 630	Wall Lower	D	Plaster	I	0.00	Non Lead-Based Paint
96	28-Aug-15	16:43:23	Room 630	Wall Upper	D	Plaster	I	0.05	Non Lead-Based Paint

XRF Shot Number	Date	Time	Sample Location	Building Component	Wall / Elevation	Substrate	Paint Condition	XRF Reading (mg/cm²)	Final Results
106	28-Aug-15	16:47:40	Room 634	Wall Lower	A	Plaster	I	0.00	Non Lead-Based Paint
107	28-Aug-15	16:48:43	Room 634	Wall Upper	A	Plaster	I	0.00	Non Lead-Based Paint
110	28-Aug-15	16:50:12	Room 634	Wall Lower	B	Plaster	I	0.03	Non Lead-Based Paint
111	28-Aug-15	16:50:42	Room 634	Wall Upper	B	Plaster	I	0.00	Non Lead-Based Paint
116	28-Aug-15	17:22:05	Room 634	Wall Lower	D	Plaster	I	0.00	Non Lead-Based Paint
117	28-Aug-15	17:22:38	Room 634	Wall Upper	D	Plaster	I	0.00	Non Lead-Based Paint
123	28-Aug-15	17:28:50	X075 Calibration	NA	NA	NA	NA	0.03	NA
124	28-Aug-15	17:29:14	X075 Calibration	NA	NA	NA	NA	0.03	NA
125	28-Aug-15	17:29:58	X075 Calibration	NA	NA	NA	NA	0.06	NA
126	28-Aug-15	17:31:21	X075 Calibration	NA	NA	NA	NA	1.09	NA
127	28-Aug-15	17:31:56	X075 Calibration	NA	NA	NA	NA	1.02	NA

XRF Shot Number	Date	Time	Sample Location	Building Component	Wall / Elevation	Substrate	Paint Condition	XRF Reading (mg/cm²)	Final Results
128	28-Aug-15	17:32:24	X075 Calibration	NA	NA	NA	NA	1.07	NA
135	28-Aug-15	17:37:36	Room 638	Wall Lower	C	Plaster	I	0.00	Non Lead-Based Paint
136	28-Aug-15	17:37:51	Room 638	Wall Upper	C	Plaster	I	0.00	Non Lead-Based Paint
154	28-Aug-15	17:49:41	Room 646	Wall Lower	A	Plaster	I	0.01	Non Lead-Based Paint
155	28-Aug-15	17:50:07	Room 646	Wall Upper	A	Plaster	I	0.00	Non Lead-Based Paint
169	28-Aug-15	18:04:42	Room 648	Wall Lower	A	Plaster	I	0.00	Non Lead-Based Paint
170	28-Aug-15	18:05:48	Room 648	Wall Upper	A	Plaster	I	0.00	Non Lead-Based Paint
171	28-Aug-15	18:06:23	Room 648	Wall Lower	C	Plaster	I	0.00	Non Lead-Based Paint
172	28-Aug-15	18:08:11	Room 648	Wall Upper	C	Plaster	I	0.00	Non Lead-Based Paint
178	28-Aug-15	18:11:58	Room 648	Wall Lower	D	Plaster	I	0.00	Non Lead-Based Paint
179	28-Aug-15	18:12:34	Room 648	Wall Upper	D	Plaster	I	0.01	Non Lead-Based Paint

XRF Shot Number	Date	Time	Sample Location	Building Component	Wall / Elevation	Substrate	Paint Condition	XRF Reading (mg/cm²)	Final Results
185	28-Aug-15	18:16:45	Room 652	Wall Lower	A	Plaster	I	0.00	Non Lead-Based Paint
186	28-Aug-15	18:17:18	Room 652	Wall Upper	A	Plaster	I	0.00	Non Lead-Based Paint
188	28-Aug-15	18:18:47	Room 652	Wall Lower	B	Plaster	I	0.00	Non Lead-Based Paint
189	28-Aug-15	18:19:15	Room 652	Wall Upper	B	Plaster	I	0.00	Non Lead-Based Paint
194	28-Aug-15	18:22:11	Room 652	Wall Lower	C	Plaster	I	0.00	Non Lead-Based Paint
195	28-Aug-15	18:22:31	Room 652	Wall Upper	C	Plaster	I	0.00	Non Lead-Based Paint
197	28-Aug-15	18:23:13	Room 652	Wall Lower	D	Plaster	I	0.00	Non Lead-Based Paint
198	28-Aug-15	18:23:57	Room 652	Wall Upper	D	Plaster	I	0.00	Non Lead-Based Paint
204	28-Aug-15	18:29:21	Women's Bathroom Next to Room 652	Wall Upper	A	Plaster	I	0.00	Non Lead-Based Paint
205	28-Aug-15	18:29:49	Women's Bathroom Next to Room 652	Wall Upper	B	Plaster	I	0.00	Non Lead-Based Paint
206	28-Aug-15	18:30:30	Women's Bathroom Next to Room 652	Wall Upper	C	Plaster	I	0.00	Non Lead-Based Paint

XRF Shot Number	Date	Time	Sample Location	Building Component	Wall / Elevation	Substrate	Paint Condition	XRF Reading (mg/cm²)	Final Results
208	28-Aug-15	18:32:09	Women's Bathroom Next to Room 652	Wall Upper	D	Plaster	I	0.00	Non Lead-Based Paint
213	28-Aug-15	18:36:10	Men's Bathroom Next to Room 652	Wall Upper	A	Plaster	I	0.00	Non Lead-Based Paint
214	28-Aug-15	18:36:33	Men's Bathroom Next to Room 652	Wall Upper	B	Plaster	I	0.00	Non Lead-Based Paint
215	28-Aug-15	18:37:36	Men's Bathroom Next to Room 652	Wall Upper	C	Plaster	I	0.00	Non Lead-Based Paint
217	28-Aug-15	18:39:24	Men's Bathroom Next to Room 652	Wall Upper	D	Plaster	I	0.00	Non Lead-Based Paint
218	28-Aug-15	18:40:13	6th Floor Hallway	Wall Upper	A	Plaster	I	0.00	Non Lead-Based Paint
219	28-Aug-15	18:42:21	6th Floor Hallway	Wall Upper	B	Plaster	I	0.00	Non Lead-Based Paint
220	28-Aug-15	18:43:15	6th Floor Hallway	Wall Upper	C	Plaster	I	0.00	Non Lead-Based Paint
221	28-Aug-15	18:44:16	6th Floor Hallway	Wall Upper	D	Plaster	I	0.00	Non Lead-Based Paint
227	28-Aug-15	18:56:00	Room 736	Wall Lower	A	Plaster	I	0.00	Non Lead-Based Paint
228	28-Aug-15	18:56:41	Room 736	Wall Upper	A	Plaster	I	0.00	Non Lead-Based Paint

XRF Shot Number	Date	Time	Sample Location	Building Component	Wall / Elevation	Substrate	Paint Condition	XRF Reading (mg/cm²)	Final Results
230	28-Aug-15	19:07:22	Room 736	Wall Lower	B	Plaster	I	0.00	Non Lead-Based Paint
231	28-Aug-15	19:08:06	Room 736	Wall Upper	B	Plaster	I	0.01	Non Lead-Based Paint
233	28-Aug-15	19:09:03	Room 736	Wall Lower	C	Plaster	I	0.00	Non Lead-Based Paint
234	28-Aug-15	19:10:23	Room 736	Wall Upper	C	Plaster	I	0.00	Non Lead-Based Paint
247	28-Aug-15	19:21:24	Room 738	Wall Lower	A	Plaster	I	0.00	Non Lead-Based Paint
248	28-Aug-15	19:21:57	Room 738	Wall Upper	A	Plaster	I	0.00	Non Lead-Based Paint
249	28-Aug-15	19:22:45	Room 738	Wall Lower	B	Plaster	I	0.00	Non Lead-Based Paint
250	28-Aug-15	19:23:19	Room 738	Wall Upper	B	Plaster	I	0.00	Non Lead-Based Paint
256	28-Aug-15	19:27:46	Room 738	Wall Lower	C	Plaster	I	0.00	Non Lead-Based Paint
257	28-Aug-15	19:29:12	Room 738	Wall Upper	C	Plaster	I	0.00	Non Lead-Based Paint
260	28-Aug-15	19:31:17	Room 740	Wall Lower	C	Plaster	I	0.00	Non Lead-Based Paint

XRF Shot Number	Date	Time	Sample Location	Building Component	Wall / Elevation	Substrate	Paint Condition	XRF Reading (mg/cm²)	Final Results
261	28-Aug-15	19:31:52	Room 740	Wall Upper	C	Plaster	I	0.00	Non Lead-Based Paint
262	28-Aug-15	19:32:25	X075 Calibration	NA	NA	NA	NA	0.08	NA
263	28-Aug-15	19:33:32	X075 Calibration	NA	NA	NA	NA	0.01	NA
264	28-Aug-15	19:34:06	X075 Calibration	NA	NA	NA	NA	0.07	NA
265	28-Aug-15	19:34:43	X075 Calibration	NA	NA	NA	NA	1.03	NA
266	28-Aug-15	19:35:26	X075 Calibration	NA	NA	NA	NA	1.07	NA
267	28-Aug-15	19:35:54	X075 Calibration	NA	NA	NA	NA	1.04	NA
273	28-Aug-15	19:44:53	Room 836	Wall Lower	A	Plaster	I	0.12	Non Lead-Based Paint
274	28-Aug-15	19:45:26	Room 836	Wall Upper	A	Plaster	I	0.06	Non Lead-Based Paint
275	28-Aug-15	19:46:11	Room 836	Wall Upper	B	Plaster	I	0.00	Non Lead-Based Paint
276	28-Aug-15	19:46:59	Room 836	Wall Lower	B	Plaster	I	0.00	Non Lead-Based Paint

XRF Shot Number	Date	Time	Sample Location	Building Component	Wall / Elevation	Substrate	Paint Condition	XRF Reading (mg/cm²)	Final Results
277	28-Aug-15	19:47:38	Room 836	Wall Lower	C	Plaster	I	0.00	Non Lead-Based Paint
278	28-Aug-15	19:48:15	Room 836	Wall Upper	C	Plaster	I	0.00	Non Lead-Based Paint
280	28-Aug-15	19:49:37	Room 836	Wall Lower	D	Plaster	I	0.00	Non Lead-Based Paint
281	28-Aug-15	19:50:17	Room 836	Wall Upper	D	Plaster	I	0.00	Non Lead-Based Paint
291	28-Aug-15	19:57:42	Room 838	Wall Lower	A	Plaster	I	0.00	Non Lead-Based Paint
292	28-Aug-15	19:58:38	Room 838	Wall Upper	A	Plaster	I	0.00	Non Lead-Based Paint
293	28-Aug-15	19:59:17	Room 838	Wall Lower	B	Plaster	I	0.00	Non Lead-Based Paint
294	28-Aug-15	19:59:45	Room 838	Wall Upper	B	Plaster	I	0.00	Non Lead-Based Paint
296	28-Aug-15	20:01:09	Room 838	Wall Lower	C	Plaster	I	0.00	Non Lead-Based Paint
297	28-Aug-15	20:01:45	Room 838	Wall Upper	C	Plaster	I	0.00	Non Lead-Based Paint
300	28-Aug-15	20:03:41	Room 838	Wall Lower	D	Plaster	I	0.00	Non Lead-Based Paint

XRF Shot Number	Date	Time	Sample Location	Building Component	Wall / Elevation	Substrate	Paint Condition	XRF Reading (mg/cm²)	Final Results
301	28-Aug-15	20:04:26	Room 838	Wall Upper	D	Plaster	I	0.00	Non Lead-Based Paint
310	28-Aug-15	20:17:56	Room 840	Wall Lower	A	Plaster	I	0.00	Non Lead-Based Paint
311	28-Aug-15	20:18:35	Room 840	Wall Upper	A	Plaster	I	0.00	Non Lead-Based Paint
312	28-Aug-15	20:19:03	Room 840	Wall Lower	B	Plaster	I	0.00	Non Lead-Based Paint
313	28-Aug-15	20:19:31	Room 840	Wall Upper	B	Plaster	I	0.00	Non Lead-Based Paint
316	28-Aug-15	20:21:17	Room 840	Wall Upper	C	Plaster	I	0.00	Non Lead-Based Paint
317	28-Aug-15	20:21:49	Room 840	Wall Lower	C	Plaster	I	0.00	Non Lead-Based Paint
322	28-Aug-15	20:25:45	Room 840	Wall Lower	D	Plaster	I	0.00	Non Lead-Based Paint
323	28-Aug-15	20:26:44	Room 840	Wall Upper	D	Plaster	I	0.00	Non Lead-Based Paint
329	28-Aug-15	20:31:15	Room 842	Wall Lower	A	Plaster	I	0.29	Non Lead-Based Paint
330	28-Aug-15	20:32:38	Room 842	Wall Upper	A	Plaster	I	0.00	Non Lead-Based Paint

XRF Shot Number	Date	Time	Sample Location	Building Component	Wall / Elevation	Substrate	Paint Condition	XRF Reading (mg/cm²)	Final Results
335	28-Aug-15	20:35:11	Room 842	Wall Lower	B	Plaster	I	0.00	Non Lead-Based Paint
336	28-Aug-15	20:36:03	Room 842	Wall Upper	B	Plaster	I	0.00	Non Lead-Based Paint
339	28-Aug-15	20:37:42	Room 842	Wall Lower	C	Plaster	I	0.00	Non Lead-Based Paint
340	28-Aug-15	20:38:17	Room 842	Wall Upper	C	Plaster	I	0.00	Non Lead-Based Paint
342	28-Aug-15	20:40:34	Room 842	Wall Lower	D	Plaster	I	0.00	Non Lead-Based Paint
343	28-Aug-15	20:42:00	Room 842	Wall Upper	D	Plaster	I	0.01	Non Lead-Based Paint
349	28-Aug-15	20:50:59	Room 536	Wall Lower	A	Plaster	I	0.00	Non Lead-Based Paint
350	28-Aug-15	20:51:39	Room 536	Wall Upper	A	Plaster	I	0.00	Non Lead-Based Paint
351	28-Aug-15	20:52:10	Room 536	Wall Lower	B	Plaster	I	0.00	Non Lead-Based Paint
352	28-Aug-15	20:52:42	Room 536	Wall Upper	B	Plaster	I	0.00	Non Lead-Based Paint
355	28-Aug-15	20:57:51	Room 536	Wall Lower	C	Plaster	I	0.00	Non Lead-Based Paint

XRF Shot Number	Date	Time	Sample Location	Building Component	Wall / Elevation	Substrate	Paint Condition	XRF Reading (mg/cm²)	Final Results
356	28-Aug-15	20:58:05	Room 536	Wall Upper	C	Plaster	I	0.00	Non Lead-Based Paint
358	28-Aug-15	20:58:31	Room 536	Wall Lower	D	Plaster	I	0.00	Non Lead-Based Paint
359	28-Aug-15	20:58:57	Room 536	Wall Upper	D	Plaster	I	0.00	Non Lead-Based Paint
366	28-Aug-15	21:03:25	Room 538	Wall Lower	A	Plaster	I	0.00	Non Lead-Based Paint
367	28-Aug-15	21:03:58	Room 538	Wall Upper	A	Plaster	I	0.00	Non Lead-Based Paint
371	28-Aug-15	21:06:41	Room 538	Wall Lower	B	Plaster	I	0.10	Non Lead-Based Paint
372	28-Aug-15	21:07:14	Room 538	Wall Upper	B	Plaster	I	0.00	Non Lead-Based Paint
378	28-Aug-15	21:11:30	Room 538	Wall Lower	C	Plaster	I	0.00	Non Lead-Based Paint
379	28-Aug-15	21:11:47	Room 538	Wall Upper	C	Plaster	I	0.00	Non Lead-Based Paint
380	28-Aug-15	21:12:12	Room 538	Wall Lower	D	Plaster	I	0.09	Non Lead-Based Paint
381	28-Aug-15	21:12:47	Room 538	Wall Upper	D	Plaster	I	0.00	Non Lead-Based Paint

XRF Shot Number	Date	Time	Sample Location	Building Component	Wall / Elevation	Substrate	Paint Condition	XRF Reading (mg/cm²)	Final Results
389	28-Aug-15	21:17:12	Room 540	Wall Lower	A	Plaster	I	0.00	Non Lead-Based Paint
390	28-Aug-15	21:17:59	Room 540	Wall Upper	A	Plaster	I	0.00	Non Lead-Based Paint
391	28-Aug-15	21:18:24	Room 540	Wall Lower	B	Plaster	I	0.00	Non Lead-Based Paint
392	28-Aug-15	21:18:48	Room 540	Wall Upper	B	Plaster	I	0.00	Non Lead-Based Paint
395	28-Aug-15	21:20:15	Room 540	Wall Lower	C	Plaster	I	0.00	Non Lead-Based Paint
396	28-Aug-15	21:20:31	Room 540	Wall Upper	C	Plaster	I	0.00	Non Lead-Based Paint
400	28-Aug-15	21:24:17	Room 540	Wall Lower	D	Plaster	I	0.00	Non Lead-Based Paint
401	28-Aug-15	21:24:53	Room 540	Wall Upper	D	Plaster	I	0.00	Non Lead-Based Paint
408	28-Aug-15	21:28:43	Room 542	Wall Lower	A	Plaster	I	0.00	Non Lead-Based Paint
409	28-Aug-15	21:29:06	Room 542	Wall Upper	A	Plaster	I	0.00	Non Lead-Based Paint
412	28-Aug-15	21:47:00	Room 542	Wall Lower	B	Plaster	I	0.00	Non Lead-Based Paint

XRF Shot Number	Date	Time	Sample Location	Building Component	Wall / Elevation	Substrate	Paint Condition	XRF Reading (mg/cm²)	Final Results
413	28-Aug-15	21:47:38	Room 542	Wall Upper	B	Plaster	I	0.00	Non Lead-Based Paint
419	28-Aug-15	21:51:11	Room 542	Wall Lower	D	Plaster	I	0.00	Non Lead-Based Paint
420	28-Aug-15	21:51:53	Room 542	Wall Upper	D	Plaster	I	0.00	Non Lead-Based Paint
422	28-Aug-15	21:52:47	X075 Calibration	NA	NA	NA	NA	0.05	NA
423	28-Aug-15	21:53:18	X075 Calibration	NA	NA	NA	NA	0.02	NA
424	28-Aug-15	21:53:48	X075 Calibration	NA	NA	NA	NA	0.03	NA
425	28-Aug-15	21:54:21	X075 Calibration	NA	NA	NA	NA	1.09	NA
426	28-Aug-15	21:55:00	X075 Calibration	NA	NA	NA	NA	1.06	NA
427	28-Aug-15	21:55:17	X075 Calibration	NA	NA	NA	NA	1.07	NA

9.0 ATTACHMENT B: LICENSES

United States Environmental Protection Agency

This is to certify that

Creative Environment Solutions (CES) Corp.

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226

In the Jurisdiction of:

New York

This certification is valid from the date of issuance and expires January 05, 2018

NY-12452-5

Certification #

September 09, 2014

Issued On

Michelle Price

Michelle Price, Chief

Lead, Heavy Metals, and Inorganics Branch

United States Environmental Protection Agency

This is to certify that

Mark Steven McCormack

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Inspector

In the Jurisdiction of:

New York

This certification is valid from the date of issuance and expires July 28, 2018

NY-I-I155496-1
Certification #

July 14, 2015
Issued On

John Gorman, Chief
Pesticides & Toxic Substances Branch

CES
WBE Certified
www.CEScenter.com

Creative Environment Solutions Corporation

39 West 37th Street 14th Floor • New York • NY • 10018
212-290-6323 • Fax 212-290-6325
LICENSED AND APPROVED by NYS DOH/DOL, NYC DOB/DEP & P.I.E.

Certificate of Completion

This Certifies that

Mark McCormack

has successfully completed the Innov-X Systems Radiation Safety & Operator Training for field portable X-Ray Fluorescence Spectrum Analyzers

John Watkins
Innov-X Systems
Authorized Trainer

Completion Date
July 16, 2015

Donald Sackett
Donald Sackett, President
Innov-X Systems

WBE Certified
www.CEScenter.com

Creative Environment Solutions Corp.
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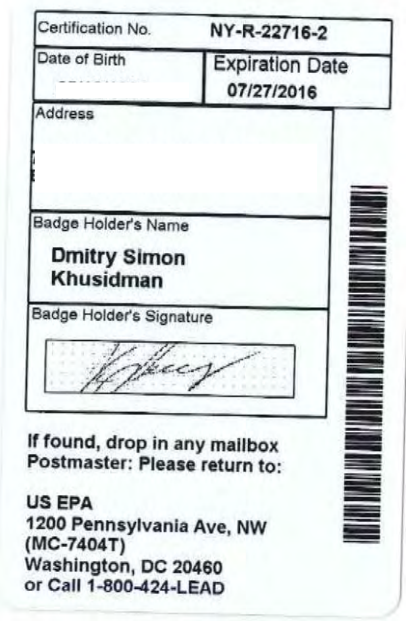
Phone: 212.290.6323 Fax: 212.290.6325
LICENSED & APPROVED by NYS DOH/DOL/DOS, NYC DOB/DEP, FDNY, PIE



Certificate of  Completion

This Certifies that

Dmitry Khusidman

has successfully completed the Innov-X Systems Radiation Safety & Operator Training for field portable X-Ray Fluorescence Spectrum Analyzers

John Watkins
Innov-X Systems
Authorized Trainer

Completion Date
December 14, 2009

Donald Sackett
Donald Sackett, President
Innov-X Systems

INNOV-X SYSTEMS™

Innovative XRF Technologies

Certificate of Calibration

Certification No: 0111695-1

Date Calibrated: 19 APR 10

Instrument No: 11695

Type: I-3000

This instrument was calibrated according to Innov-X Systems in-house calibration procedure. The calibration was verified using Alloy Certified Reference Materials produced by Analytical Reference Materials International (ARMI).

This instrument conforms to Innov-X Systems Quality Assurance standards.

Quality Control

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Worldwide Headquarters
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(781) 938-5005 Fax: (781) 938-0128
www.innovxsys.com

Performance Characteristic Sheet

EFFECTIVE DATE: **December 1, 2006** **EDITION NO.: 1**

MANUFACTURER AND MODEL:

Make: ***Innov-X Systems, Inc.***
Models: ***LBP4000 with software version 1.4 and higher***
Source: ***X-ray tube***

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Inspection mode, variable reading time.

XRF CALIBRATION CHECK LIMITS:

1.0 to 1.1 mg/cm^2 (inclusive)

SUBSTRATE CORRECTION:

Not applicable

INCONCLUSIVE RANGE OR THRESHOLD:

INSPECTION MODE READING DESCRIPTION	SUBSTRATE	INCONCLUSIVE RANGE (mg/cm^2)
Results not corrected for substrate bias on any substrate	Brick	0.6 to 1.1
	Concrete	0.6 to 1.1
	Drywall	0.6 to 1.1
	Metal	0.6 to 1.1
	Plaster	0.6 to 1.1
	Wood	0.6 to 1.1

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted on 146 test locations, with two separate instruments, in December 2005.

OPERATING PARAMETERS:

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

XRF CALIBRATION CHECK:

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm^2 in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm^2 film).

If the average (rounded to 1 decimal place) of three readings is outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instrument into control before XRF testing proceeds.

SUBSTRATE CORRECTION VALUE COMPUTATION:

Chapter 7 of the HUD Guidelines provides guidance on correcting XRF results for substrate bias. Supplemental guidance for using the paint film nearest 1.0 mg/cm^2 for substrate correction is provided:

XRF results are corrected for substrate bias by subtracting from each XRF result a correction value determined separately in each house for single-family housing or in each development for multifamily housing, for each substrate. The correction value is an average of XRF readings taken over the NIST SRM paint film nearest to 1.0 mg/cm^2 at test locations that have been scraped bare of their paint covering. Compute the correction values as follows:

Using the same XRF instrument, take three readings on a bare substrate area covered with the NIST SRM paint film nearest 1 mg/cm^2. Repeat this procedure by taking three more readings on a second bare substrate area of the same substrate covered with the NIST SRM.

Compute the correction value for each substrate type where XRF readings indicate substrate correction is needed by computing the average of all six readings as shown below.

For each substrate type (the 1.02 mg/cm^2 NIST SRM is shown in this example; use the actual lead loading of the NIST SRM used for substrate correction):

Correction value = (1st + 2nd + 3rd + 4th + 5th + 6th *Reading*) / 6 - 1.02 mg/cm^2

Repeat this procedure for each substrate requiring substrate correction in the house or housing development.

EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing.

Conduct XRF re-testing at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family and multi-family housing, a result is defined as a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and the retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF readings.

Compute the average of all ten re-test XRF readings.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

TESTING TIMES:

For the variable-time inspection paint test mode, the instrument continues to read until it has determined whether the result is positive or negative (with respect to the 1.0 mg/cm^2 Federal standard), with 95% confidence. The following table provides testing time information for this testing mode.

Testing Times Using Variable Reading Time Inspection Mode (Seconds)						
	All Data			Median for laboratory-measured lead levels (mg/cm^2)		
Substrate	25th Percentile	Median	75th Percentile	Pb < 0.25	0.25 ≤ Pb < 1.0	1.0 ≤ Pb
Wood, Drywall	2.1	2.3	5.4	2.2	5.4	2.2
Metal	2.6	3.2	5.3	2.7	5.1	5.1
Brick, Concrete, Plaster	3.1	4.0	5.7	3.2	4.0	5.9

CLASSIFICATION OF RESULTS:

When an inconclusive range is specified on the *Performance Characteristic Sheet*, XRF results are classified as positive if they are greater than the upper boundary of the inconclusive range, negative if they are less than the lower boundary of the inconclusive range, or inconclusive if in between. The inconclusive range includes both its upper and lower bounds. If the instrument reads "> x mg/cm^2", the value "x" should be used for classification purposes, ignoring the ">". For example, a reading reported as ">1.0 mg/cm^2" is classified as 1.0 mg/cm^2, or inconclusive. When the inconclusive range reported in this PCS is used to classify the readings obtained in the EPA/HUD evaluation, the following False Positive, False Negative and Inconclusive rates are obtained:

FALSE POSITIVE RATE: 2.5% (2/80)

FALSE NEGATIVE RATE: 1.9% (4/212)

INCONCLUSIVE RATE: 16.4% (48/212)

DOCUMENTATION:

A document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD.

This XRF Performance Characteristic Sheet was developed by the Midwest Research Institute (MRI) and QuanTech, Inc., under a contract between MRI and the XRF manufacturer. XRF Performance Characteristic Sheets were originally developed by the MRI under a grant from the U. S. Environmental Protection Agency and the U.S. Department of Housing and Urban Development. HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*.

National Institute of Standards & Technology

Certificate of Analysis

Standard Reference Material® 2573

Lead Paint Film
For Portable X-Ray Fluorescence Analyzers – Nominal 1.0 mg/cm^2
(Color Code: Red)

This Standard Reference Material (SRM) is intended for checking the calibration of portable, hand-held, x-ray fluorescence analyzers when testing for lead in paint coatings on interior and exterior building surfaces. A unit of SRM 2573 consists of a white polyester sheet, approximately 7.6 cm wide, 10.2 cm long, and 0.2 mm thick, coated with a single, red-colored paint layer, approximately 0.04 mm thick. A blank, SRM 2570, is also provided. The blank is coated with a lead-free, lacquer layer on a white polyester sheet of the same thickness as the lead paint samples. All sheets are over-coated with a clear, thin, plastic laminate to protect the surface from abrasion. SRM 2573 and SRM 2570 are two of a set of six paint films (SRM 2570 to SRM 2575) available as SRM 2579a.

The certified values for lead for this SRM and the blank, SRM 2570, are reported in Table 1 in units of mg/cm^2. These values are based on measurements by isotope dilution inductively-coupled plasma mass spectrometry.

Table 1. Certified Lead Values

Level	Color Code	Lead Concentration, in mg/cm^2
SRM 2570	White (Blank)	<0.001
SRM 2573	Red	1.040 ± 0.064

The uncertainty of each certified value is expressed as an expanded uncertainty, U, at the 95 % level of confidence and is calculated according to the method described in the ISO Guide [1,2]. Because of variability in the paint film between different sheets of each SRM, the uncertainties are 95 % prediction intervals. The expanded uncertainty is calculated as $U = ku_c$, where u_c is intended to represent, at the level of one standard deviation, the combined uncertainty due to material variability and measurement uncertainty. The coverage factor, k, is determined from the Student's t-distribution corresponding to the calculated effective degrees of freedom and 95 % level of confidence.

Expiration of Certification: The certification of SRM 2573 is valid, within the measurement uncertainties specified, until **01 July 2020**, provided the SRM is handled and stored in accordance with the instructions given in this certificate (see "Instructions for Use"). The certification is nullified if the SRM is damaged, contaminated, or otherwise modified.

Maintenance of SRM Certification: NIST will monitor this SRM over the period of its certification. If substantive technical changes occur that affect the certification before the expiration of this certificate, NIST will notify the purchaser. Registration (see attached sheet) will facilitate notification.

The overall direction and coordination of the analytical measurements leading to certification were performed by G.C. Turk and J.D. Fassett of the NIST Analytical Chemistry Division. Analytical measurements were performed by K.E. Murphy, J.R. Sieber, A.F. Marlow, L.J. Wood, P.R. Seo, and M. Lankosz of the NIST Analytical Chemistry Division. The SRM was fabricated under the direction of J.R. Sieber of the NIST Analytical Chemistry Division.

Stephen A. Wise, Chief
Analytical Chemistry Division

Gaithersburg, MD 20899
Certificate Issue Date: 24 March 2009
See Certificate Revision History on Last Page

Robert L. Watters, Jr., Chief
Measurement Services Division

Statistical consultation for this SRM was provided by E.S. Lagergren and N.F. Zhang of the NIST Statistical Engineering Division.

Support aspects involved in the issuance of this SRM were coordinated through the NIST Measurement Services Divisiou.

NOTICE AND WARNING TO USERS

NOTE: This SRM contains lead, as a lead chromate pigment, which is toxic and a suspected carcinogen to the lung and kidney. The SRM must be handled with care and disposed of according to the U.S. Environmental Protection Agency (EPA) practices and procedures.

INSTRUCTIONS FOR USE

The SRM sheet must first be removed from the plastic sleeve in which it is stored and then positioned so that the side labeled with the NIST logo and SRM number faces the x-ray source. For best results, the size of the x-ray beam from the field unit should irradiate an area of the SRM that is at least 2.5 cm in diameter and is centered on the sheet. Care must be exercised not to compromise the protective plastic laminate which prevents scratching or chipping of the painted surface and the potential release of dust containing lead. Upon completion of the measurement, the SRM must be re-stored in the plastic sleeve provided. It is also recommended that this SRM be stored indoors at ambient room temperature and away from direct sunlight when not in use.

Stability: This SRM is considered to be stable during the period of certification. NIST will monitor the SRM and will report any significant changes in certification to the purchaser. Return of the attached registration card will facilitate notification.

PREPARATION

SRM Preparation: The paint-coated, polyester sheets were prepared by an automated coating process at a commercial facility under contract to NIST. Known concentrations of a lead chromate pigment were dispersed in a commercial paint vehicle to prepare the lead paints. A lead-free, organic tint was added to each paint mixture to give the desired color. A thin, protective overlay of plastic laminate was applied to each paint film. The attenuation of lead L_3-$M_{4,5}$ ($L\alpha_{1,2}$) X-rays due to the protective overlay does not exceed 2 % relative, while that of K-$L_{2,3}$ ($K\alpha_{1,2}$) x-rays commonly used for field measurement is negligible.

REFERENCES

[1] ISO; *Guide to the Expression of Uncertainty in Measurement*; ISBN 92-67-10188-9, 1st ed., International Organization for Standardization: Geneva, Switzerland (1993); see also Taylor, B.N.; Kuyatt, C.E.; *Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results*; NIST Technical Note 1297, U.S. Government Printing Office: Washington, DC (1994); available at http://physics.nist.gov/Pubs/.

[2] Hahn, G.J.; Meeker, W.Q.; *Statistical Intervals: A Guide for Practitioners*; John Wiley & Sons, Inc., New York, NY (1991).

Certificate Revision History: 24 March 2009 (Extension of certification period); 29 November 1999 (Original certificate date).

Users of this SRM should ensure that the certificate in their possession is current. This can be accomplished by contacting the SRM Program at: telephone (301) 975-2200; fax (301) 926-4751; e-mail srminfo@nist.gov; or via the Internet at http://www.nist.gov/srm.

The Innov-X Alpha Series portable XRF technology does not use any radioactive materials. The Radioactive Materials Handling License is not required.

Please review the following two pages, an overview of the Innov-X Alpha Series Paint Analyzer.

INNOV-X SYSTEMS
Innovative XRF Technologies

Overview on the Inspector Series for PCS based, Residential Lead Paint Inspections

Innov-X is pleased to bring tube-based XRF technology to the lead inspection community. The Inspector Series combines freedom from radioactivity with the most advanced lead paint analyzer available.

It features:

- ✓ lightning-fast test times that never slow down;
- ✓ PDA-driven with efficient dropdown menus for test location entry;
- ✓ color touch screen display;
- ✓ ergonomic – just 3 lbs!

Key Performance Items in the HUD PCS:

- ➢ No Radioactive Isotopes: The LBP4000 features an x-ray tube that uses an electric current to generate a source of x-rays.
- ➢ With no radioactive materials, the Inspector eliminates materials licensing, travel restrictions and reduces compliance requirements. In most states, only a simple registration from is required.

Specific advantages:

1. Dramatically lower source replacement costs, saving thousands of dollars over 5 years
2. Shortest test times of any HUD accepted system – fastest by a factor or 3 or 4!!!
3. No loss of testing speed over time. The Inspector is as fast at 3 years as it is brand new.
4. Reduces or eliminates regulatory compliance costs.
5. Eliminates the liability and risk of carrying radioactive materials, especially into residential locations and schools.
6. No substrate corrections.
7. Best Precision. Based on PCS testing data, the LBP4000 has a precision of ± 0.05 mg/cm2 on a NIST 1.02 mg/cm2 standard – better than all isotope-based XRFs.

The Facts about an Inconclusive Range

Inconclusive Range: Any test result between 0.6 mg/cm2 and 1.1 mg/cm2 is inclusive should be classified as either Positive or Inconclusive according to HUD Guidelines.

In practical application, the actual number of inconclusive test results will be exceedingly low. In the real world of lead paint inspection, it is very unlikely to encounter paint measurements between 0.6 mg/cm2 and 1.1 mg/cm2. This statement is supported by the MRI Study upon which the PCS method is based. This study showed the vast majority of lead paint around the country was less than 0.5 mg/cm2 or greater than 2.0 mg/cm2. Most inspectors already own isotope-based XRF systems and can review their historical data to validate the rarity of obtaining XRF results between 0.6 mg/cm2 and 1.1 mg/cm2.

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INNOV-X SYSTEMS
Innovative XRF Technologies

For an inconclusive result, often moving to a different location on the same component yields a conclusive result, due to the well-documented variability of lead levels on surfaces due to painting history.

Inconclusive results with tube-based XRFs are often the result of layered lead paint where a layer of lead paint near the surface blocks the x-rays form accurately exciting a leaded layer of paint beneath. The operator has the option of taking a discreet paint chip and flipping it over to x-ray through the back of the sample to achieve a conclusive positive result. Taking a conservative approach, these inconclusive scenarios can be classified as Positive readings according to HUD.

Public opinion can turn against isotopes quickly! When non-radioactive choices are available, property owners, regulators and health officials may encourage or even demand that XRF systems not contain radioactive isotopes. This has been the trend in other markets, where when a choice exists, there results in a groundswell of demand for the nonradioactive alternative. As many public health officials have stated – why should health and environmental safety officials be carrying radioactive materials into children's dwellings? The small cost of a rare occasional inconclusive test will be insignificant compared to the reduced liability and increased safety of non-radioactive XRF systems.

Innov-X Systems is proud to introduce the world's first XRF lead paint analyzer without radioactive sources. Having delivered nearly 3,000 handheld XRF systems for other applications, we have repeatedly witnessed the marketplace rapidly embrace the non-isotope alternative. We look forward to bringing freedom from radioactive isotopes to the lead testing marketplace as well.

Choose the Non-Radioactive Option!

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10.0 ATTACHMENT C: PROJECT DOCUMENTATIONS

Reading	Date	Time	Sample Location	Building Component	Wall/Elevation	Substrate	Paint Condition	Pb	Pass Fail Standard
1	28-Aug-15	13:15:55	Standardization					-0.039967	PASS
2	28-Aug-15	13:16:36	Office Calibration					0.07	Negative
3	28-Aug-15	13:17:00	Office Calibration					0.06	Negative
4	28-Aug-15	13:17:12	Office Calibration					0.01	Negative
5	28-Aug-15	13:17:23	Office Calibration					1.02	Positive
6	28-Aug-15	13:17:55	Office Calibration					1.08	Positive
7	28-Aug-15	13:18:11	Office Calibration					1.01	Positive
8	28-Aug-15	15:27:03	Standardization					-0.399940	PASS
9	28-Aug-15	15:27:16	X475 Calibration					0.09	Negative
10	28-Aug-15	15:27:58	X475 Calibration					0.02	Negative
11	28-Aug-15	15:28:13	X475 Calibration					0.07	Negative
12	28-Aug-15	15:28:31	X475 Calibration					1.02	Positive
13	28-Aug-15	15:28:48	X475 Calibration					1.10	Positive
14	28-Aug-15	15:29:09	X475 Calibration					1.02	Positive
19	28-Aug-15	15:32:59	Room 622	Wall Lower	A	Plaster	I	0.00	Negative
20	28-Aug-15	15:33:24	Room 622	Wall Upper	A	Plaster	I	0.02	Negative
26	28-Aug-15	15:36:41	Room 622	Wall Lower	B	Plaster	I	0.00	Negative
27	28-Aug-15	15:37:11	Room 622	Wall Upper	B	Plaster	I	0.01	Negative
32	28-Aug-15	15:39:39	Room 622	Wall Lower	D	Plaster	I	0.00	Negative
33	28-Aug-15	15:40:26	Room 622	Wall Upper	D	Plaster	I	0.00	Negative
40	28-Aug-15	15:44:05	Room 626	Wall Lower	A	Plaster	I	0.00	Negative
41	28-Aug-15	15:44:27	Room 626	Wall Upper	A	Plaster	I	0.01	Negative
45	28-Aug-15	15:47:18	Room 626	Wall Lower	B	Plaster	I	0.05	Negative
46	28-Aug-15	15:47:42	Room 626	Wall Upper	B	Plaster	I	0.05	Negative
48	28-Aug-15	15:49:58	Room 626	Wall Lower	C	Plaster	I	0.06	Negative
49	28-Aug-15	15:50:11	Room 626	Wall Upper	C	Plaster	I	0.00	Negative
53	28-Aug-15	16:06:49	Room 626	Wall Lower	D	Plaster	I	0.00	Negative
54	28-Aug-15	16:07:06	Room 626	Wall Upper	D	Plaster	I	0.13	Negative
60	28-Aug-15	16:08:53	Room 628	Wall Lower	A	Plaster	I	0.00	Negative
61	28-Aug-15	16:09:08	Room 628	Wall Upper	A	Plaster	I	1.00	Negative
64	28-Aug-15	16:10:26	Room 628	Wall Lower	B	Plaster	I	0.00	Negative
65	28-Aug-15	16:11:15	Room 628	Wall Upper	B	Plaster	I	0.01	Negative
67	28-Aug-15	16:12:07	Room 628	Wall Lower	C	Plaster	I	0.00	Negative
68	28-Aug-15	16:12:35	Room 628	Wall Upper	C	Plaster	I	0.03	Negative
75	28-Aug-15	16:18:41	Room 628	Wall Lower	D	Plaster	I	0.00	Negative
76	28-Aug-15	16:19:04	Room 628	Wall Upper	D	Plaster	I	0.00	Negative
82	28-Aug-15	16:23:19	Room 630	Wall Lower	A	Plaster	I	0.00	Negative
83	28-Aug-15	16:24:28	Room 630	Wall Upper	A	Plaster	I	0.00	Negative
87	28-Aug-15	16:36:58	Room 630	Wall Lower	B	Plaster	I	0.00	Negative
88	28-Aug-15	16:37:14	Room 630	Wall Upper	B	Plaster	I	0.02	Negative
90	28-Aug-15	16:38:28	Room 630	Wall Lower	C	Plaster	I	0.00	Negative
91	28-Aug-15	16:39:14	Room 630	Wall Upper	C	Plaster	I	0.00	Negative
95	28-Aug-15	16:42:14	Room 630	Wall Lower	D	Plaster	I	0.00	Negative
96	28-Aug-15	16:43:23	Room 630	Wall Upper	D	Plaster	I	0.05	Negative
106	28-Aug-15	16:47:40	Room 634	Wall Lower	A	Plaster	I	0.00	Negative
107	28-Aug-15	16:48:43	Room 634	Wall Upper	A	Plaster	I	0.00	Negative
110	28-Aug-15	16:50:12	Room 634	Wall Lower	B	Plaster	I	0.03	Negative
111	28-Aug-15	16:50:42	Room 634	Wall Upper	B	Plaster	I	0.00	Negative
116	28-Aug-15	17:22:05	Room 634	Wall Lower	D	Plaster	I	0.00	Negative
117	28-Aug-15	17:22:38	Room 634	Wall Upper	D	Plaster	I	0.00	Negative
123	28-Aug-15	17:28:50	X475 Calibration					0.03	Negative
124	28-Aug-15	17:29:14	X475 Calibration					0.03	Negative
125	28-Aug-15	17:29:58	X475 Calibration					0.06	Negative
126	28-Aug-15	17:31:21	X475 Calibration					1.09	Positive
127	28-Aug-15	17:31:56	X475 Calibration					1.02	Positive
128	28-Aug-15	17:32:24	X475 Calibration					1.07	Positive
135	28-Aug-15	17:37:36	Room 638	Wall Lower	C	Plaster	I	0.00	Negative
136	28-Aug-15	17:37:51	Room 638	Wall Upper	C	Plaster	I	0.00	Negative
154	28-Aug-15	17:49:41	Room 646	Wall Lower	A	Plaster	I	0.01	Negative
155	28-Aug-15	17:50:07	Room 646	Wall Upper	A	Plaster	I	0.00	Negative
169	28-Aug-15	18:04:42	Room 648	Wall Lower	A	Plaster	I	0.00	Negative
170	28-Aug-15	18:05:48	Room 648	Wall Upper	A	Plaster	I	0.00	Negative
171	28-Aug-15	18:06:23	Room 648	Wall Lower	C	Plaster	I	0.00	Negative
172	28-Aug-15	18:08:11	Room 648	Wall Upper	C	Plaster	I	0.00	Negative
178	28-Aug-15	18:11:58	Room 648	Wall Lower	D	Plaster	I	0.00	Negative
179	28-Aug-15	18:12:34	Room 648	Wall Upper	D	Plaster	I	0.01	Negative
185	28-Aug-15	18:16:45	Room 652	Wall Lower	A	Plaster	I	0.00	Negative
186	28-Aug-15	18:17:18	Room 652	Wall Upper	A	Plaster	I	0.00	Negative
188	28-Aug-15	18:18:47	Room 652	Wall Lower	B	Plaster	I	0.00	Negative
189	28-Aug-15	18:19:15	Room 652	Wall Upper	B	Plaster	I	0.00	Negative
194	28-Aug-15	18:22:11	Room 652	Wall Lower	C	Plaster	I	0.00	Negative
195	28-Aug-15	18:22:31	Room 652	Wall Upper	C	Plaster	I	0.00	Negative
197	28-Aug-15	18:23:13	Room 652	Wall Lower	D	Plaster	I	0.00	Negative
198	28-Aug-15	18:23:57	Room 652	Wall Upper	D	Plaster	I	0.00	Negative
204	28-Aug-15	18:29:21	Women's Bathroom Next to Room 652	Wall Upper	A	Plaster	I	0.00	Negative
205	28-Aug-15	18:29:49	Women's Bathroom Next to Room 652	Wall Upper	B	Plaster	I	0.00	Negative
206	28-Aug-15	18:30:30	Women's Bathroom Next to Room 652	Wall Upper	C	Plaster	I	0.00	Negative
208	28-Aug-15	18:32:09	Women's Bathroom Next to Room 652	Wall Upper	D	Plaster	I	0.00	Negative
213	28-Aug-15	18:36:10	Men's Bathroom Next to Room 652	Wall Upper	A	Plaster	I	0.00	Negative
214	28-Aug-15	18:36:33	Men's Bathroom Next to Room 652	Wall Upper	B	Plaster	I	0.00	Negative
215	28-Aug-15	18:37:36	Men's Bathroom Next to Room 652	Wall Upper	C	Plaster	I	0.00	Negative
217	28-Aug-15	18:39:24	Men's Bathroom Next to Room 652	Wall Upper	D	Plaster	I	0.00	Negative

218	28-Aug-15	18:40:13	6th Floor Hallway	Wall Upper	A	Plaster	I	0.00	Negative
219	28-Aug-15	18:42:21	6th Floor Hallway	Wall Upper	B	Plaster	I	0.00	Negative
220	28-Aug-15	18:43:15	6th Floor Hallway	Wall Upper	C	Plaster	I	0.00	Negative
221	28-Aug-15	18:44:16	6th Floor Hallway	Wall Upper	D	Plaster	I	0.00	Negative
227	28-Aug-15	18:56:00	Room 736	Wall Lower	A	Plaster	I	0.00	Negative
228	28-Aug-15	18:56:41	Room 736	Wall Upper	A	Plaster	I	0.00	Negative
230	28-Aug-15	19:07:22	Room 736	Wall Lower	B	Plaster	I	0.00	Negative
231	28-Aug-15	19:08:06	Room 736	Wall Upper	B	Plaster	I	0.01	Negative
233	28-Aug-15	19:09:03	Room 736	Wall Lower	C	Plaster	I	0.00	Negative
234	28-Aug-15	19:10:23	Room 736	Wall Upper	C	Plaster	I	0.00	Negative
247	28-Aug-15	19:21:24	Room 738	Wall Lower	A	Plaster	I	0.00	Negative
248	28-Aug-15	19:21:57	Room 738	Wall Upper	A	Plaster	I	0.00	Negative
249	28-Aug-15	19:22:45	Room 738	Wall Lower	B	Plaster	I	0.00	Negative
250	28-Aug-15	19:23:19	Room 738	Wall Upper	B	Plaster	I	0.00	Negative
256	28-Aug-15	19:27:46	Room 738	Wall Lower	C	Plaster	I	0.00	Negative
257	28-Aug-15	19:29:12	Room 738	Wall Upper	C	Plaster	I	0.00	Negative
260	28-Aug-15	19:31:17	Room 740	Wall Lower	C	Plaster	I	0.00	Negative
261	28-Aug-15	19:31:52	Room 740	Wall Upper	C	Plaster	I	0.00	Negative
262	28-Aug-15	19:32:25	X475 Calibration					0.08	Negative
263	28-Aug-15	19:33:32	X475 Calibration					0.01	Negative
264	28-Aug-15	19:34:06	X475 Calibration					0.07	Negative
265	28-Aug-15	19:34:43	X475 Calibration					1.03	Positive
266	28-Aug-15	19:35:26	X475 Calibration					1.07	Positive
267	28-Aug-15	19:35:54	X475 Calibration					1.04	Positive
273	28-Aug-15	19:44:53	Room 836	Wall Lower	A	Plaster	I	0.12	Negative
274	28-Aug-15	19:45:26	Room 836	Wall Upper	A	Plaster	I	0.06	Negative
275	28-Aug-15	19:46:11	Room 836	Wall Upper	B	Plaster	I	0.00	Negative
276	28-Aug-15	19:46:59	Room 836	Wall Lower	B	Plaster	I	0.00	Negative
277	28-Aug-15	19:47:38	Room 836	Wall Lower	C	Plaster	I	0.00	Negative
278	28-Aug-15	19:48:15	Room 836	Wall Upper	C	Plaster	I	0.00	Negative
280	28-Aug-15	19:49:37	Room 836	Wall Lower	D	Plaster	I	0.00	Negative
281	28-Aug-15	19:50:17	Room 836	Wall Upper	D	Plaster	I	0.00	Negative
291	28-Aug-15	19:57:42	Room 838	Wall Lower	A	Plaster	I	0.00	Negative
292	28-Aug-15	19:58:38	Room 838	Wall Upper	A	Plaster	I	0.00	Negative
293	28-Aug-15	19:59:17	Room 838	Wall Lower	B	Plaster	I	0.00	Negative
294	28-Aug-15	19:59:45	Room 838	Wall Upper	B	Plaster	I	0.00	Negative
296	28-Aug-15	20:01:09	Room 838	Wall Lower	C	Plaster	I	0.00	Negative
297	28-Aug-15	20:01:45	Room 838	Wall Upper	C	Plaster	I	0.00	Negative
300	28-Aug-15	20:03:41	Room 838	Wall Lower	D	Plaster	I	0.00	Negative
301	28-Aug-15	20:04:26	Room 838	Wall Upper	D	Plaster	I	0.00	Negative
310	28-Aug-15	20:17:56	Room 840	Wall Lower	A	Plaster	I	0.00	Negative
311	28-Aug-15	20:18:35	Room 840	Wall Upper	A	Plaster	I	0.00	Negative
312	28-Aug-15	20:19:03	Room 840	Wall Lower	B	Plaster	I	0.00	Negative
313	28-Aug-15	20:19:31	Room 840	Wall Upper	B	Plaster	I	0.00	Negative
316	28-Aug-15	20:21:17	Room 840	Wall Upper	C	Plaster	I	0.00	Negative
317	28-Aug-15	20:21:49	Room 840	Wall Lower	C	Plaster	I	0.00	Negative
322	28-Aug-15	20:25:45	Room 840	Wall Lower	D	Plaster	I	0.00	Negative
323	28-Aug-15	20:26:44	Room 840	Wall Upper	D	Plaster	I	0.00	Negative
329	28-Aug-15	20:31:15	Room 842	Wall Lower	A	Plaster	I	0.29	Negative
330	28-Aug-15	20:32:38	Room 842	Wall Upper	A	Plaster	I	0.00	Negative
335	28-Aug-15	20:35:11	Room 842	Wall Lower	B	Plaster	I	0.00	Negative
336	28-Aug-15	20:36:03	Room 842	Wall Upper	B	Plaster	I	0.00	Negative
339	28-Aug-15	20:37:42	Room 842	Wall Lower	C	Plaster	I	0.00	Negative
340	28-Aug-15	20:38:17	Room 842	Wall Upper	C	Plaster	I	0.00	Negative
342	28-Aug-15	20:40:34	Room 842	Wall Lower	D	Plaster	I	0.00	Negative
343	28-Aug-15	20:42:00	Room 842	Wall Upper	D	Plaster	I	0.01	Negative
349	28-Aug-15	20:50:59	Room 536	Wall Lower	A	Plaster	I	0.00	Negative
350	28-Aug-15	20:51:39	Room 536	Wall Upper	A	Plaster	I	0.00	Negative
351	28-Aug-15	20:52:10	Room 536	Wall Lower	B	Plaster	I	0.00	Negative
352	28-Aug-15	20:52:42	Room 536	Wall Upper	B	Plaster	I	0.00	Negative
355	28-Aug-15	20:57:51	Room 536	Wall Lower	C	Plaster	I	0.00	Negative
356	28-Aug-15	20:58:05	Room 536	Wall Upper	C	Plaster	I	0.00	Negative
358	28-Aug-15	20:58:31	Room 536	Wall Lower	D	Plaster	I	0.00	Negative
359	28-Aug-15	20:58:57	Room 536	Wall Upper	D	Plaster	I	0.00	Negative
366	28-Aug-15	21:03:25	Room 538	Wall Lower	A	Plaster	I	0.00	Negative
367	28-Aug-15	21:03:58	Room 538	Wall Upper	A	Plaster	I	0.00	Negative
371	28-Aug-15	21:06:41	Room 538	Wall Lower	B	Plaster	I	0.10	Negative
372	28-Aug-15	21:07:14	Room 538	Wall Upper	B	Plaster	I	0.00	Negative
378	28-Aug-15	21:11:30	Room 538	Wall Lower	C	Plaster	I	0.00	Negative
379	28-Aug-15	21:11:47	Room 538	Wall Upper	C	Plaster	I	0.00	Negative
380	28-Aug-15	21:12:12	Room 538	Wall Lower	D	Plaster	I	0.09	Negative
381	28-Aug-15	21:12:47	Room 538	Wall Upper	D	Plaster	I	0.00	Negative
389	28-Aug-15	21:17:12	Room 540	Wall Lower	A	Plaster	I	0.00	Negative
390	28-Aug-15	21:17:59	Room 540	Wall Upper	A	Plaster	I	0.00	Negative
391	28-Aug-15	21:18:24	Room 540	Wall Lower	B	Plaster	I	0.00	Negative
392	28-Aug-15	21:18:48	Room 540	Wall Upper	B	Plaster	I	0.00	Negative
395	28-Aug-15	21:20:15	Room 540	Wall Lower	C	Plaster	I	0.00	Negative
396	28-Aug-15	21:20:31	Room 540	Wall Upper	C	Plaster	I	0.00	Negative
400	28-Aug-15	21:24:17	Room 540	Wall Lower	D	Plaster	I	0.00	Negative
401	28-Aug-15	21:24:53	Room 540	Wall Upper	D	Plaster	I	0.00	Negative
408	28-Aug-15	21:28:43	Room 542	Wall Lower	A	Plaster	I	0.00	Negative
409	28-Aug-15	21:29:06	Room 542	Wall Upper	A	Plaster	I	0.00	Negative
412	28-Aug-15	21:47:00	Room 542	Wall Lower	B	Plaster	I	0.00	Negative

413	28-Aug-15	21:47:38	Room 542	Wall Upper	B	Plaster	I	0.00	Negative
419	28-Aug-15	21:51:11	Room 542	Wall Lower	D	Plaster	I	0.00	Negative
420	28-Aug-15	21:51:53	Room 542	Wall Upper	D	Plaster	I	0.00	Negative
422	28-Aug-15	21:52:47	X475 Calibration					0.05	Negative
423	28-Aug-15	21:53:18	X475 Calibration					0.02	Negative
424	28-Aug-15	21:53:48	X475 Calibration					0.03	Negative
425	28-Aug-15	21:54:21	X475 Calibration					1.09	Positive
426	28-Aug-15	21:55:00	X475 Calibration					1.06	Positive
427	28-Aug-15	21:55:17	X475 Calibration					1.07	Positive