October 9, 2013

Mr. Bernard P. Orlan
Director, Environmental Health & Safety
New York City Department of Education
44-36 Vernon Blvd., 3rd Floor
Long Island City, NY 11101

Re: PCB Wipe Sampling Report
P.S. 157X
Cardno ATC Project: No. 42672.3188
Work Order No. 00511878 04

Dear Mr. Orlan:

Cardno ATC was retained by NYC-DOE to perform a limited PCB wipe sampling inspection at X157 located at 757 Cauldwell Avenue, Bronx, NY 10456. The inspection was performed by Mr. Sydney Williams on October 10, 2013 and it was limited to wipe samples collection and analysis in Room #224 to determine if any surface was contaminated with PCB, following the removal of failed T-12 light fixture ballast. The light fixture ballast was removed by Triumvirate Environmental, a hazardous waste management contractor retained by NYC-DOE to provide removal and clean up services.

BACKGROUND

Polychlorinated biphenyls are a group of man-made chemicals that can cause a number of different harmful effects. PCB's are either oily liquids or solids and are colorless to light yellow. There are no known natural sources of PCB's in the environment. PCB's were used mainly in making electrical transformers, capacitors and other heat transfer devices but some were also used in building materials.

PCB's may be present in older fluorescent light fixtures in any school building that had fluorescent lights installed before 1979 and never had a lighting upgrade. The ballast is a transformer inside the light fixture that is not accessible unless the light is disassembled. PCB's are contained within the light ballasts' capacitors and in the ballasts' potting material (a black tar-like substance used to protect the capacitor). As the ballast ages, it can overheat causing a burning or smoky odor or in some cases, causing tar from the potting material or oil to drip from the fixture.

Indications of leaking PCB ballasts may include the presence of an oily film on the metal casing, a leaking putty-like compound (the potting material), or discoloration of the metal casing. Other leaking signs include drips, buzzing, and discoloration of the light ends. Almost all ballast casings are a single color (often black or white) with a contrasting label. Leaks, when present, are usually found around the metal seams of the casing. Indications of burning PCB ballast may include: an acrid and burning tar odor; melted tar oozing from the casing seams; and visible electrical lead bushings. It is very rare for PCB ballasts to actually catch on fire.

Evaluation Criteria for PCB Spills

PCB manufacture, use, storage and disposal are regulated by U.S. EPA under TSCA and Part 761, Title 40 of the Code of Federal Regulations (40 CFR Part 761). TSCA regulates any materials or wastes that contain PCBs at concentrations of 50 ppm (parts per million) or greater. Light ballasts containing PCB oil in the small capacitor or the potting compound are included in this regulation. Leaking PCB ballasts are regulated as hazardous wastes and toxic substances. Proper handling and cleanup of leaking PCB ballasts is necessary to protect public health and the environment. TSCA regulates disposal of PCB wastes with concentrations over 1 ppm. Leaking PCB light ballasts often generate wastes in excess of 1 ppm. In addition, PCBs are regulated under TSCA if an impervious surface shows 10 micrograms (ug) per 100 square centimeters (cm^2) of PCBs. Examples of this in the classroom are the surfaces of floors, desks, and bookcases.

PCB WIPE SAMPLES

Cardno ATC collected a total of six (6) samples (five surface samples and one blank) within Room #224 and subsequently sent them to New York Environmental and Analytical Labs., Inc. for analysis via EPA 8082 Method. All samples were obtained in accordance with EPA 40CFR 761.123 and NYC-DOE "*PCB Light Ballasts Wipe Sampling Protocol*" and included using a 10x10 cm template to outline the sample area and a sterile gauze pad wetted with hexane or reagent grade acetone to collect the sample. The hexane or reagent grade acetone wetted pad was used to wipe the area outlined with the 100 cm^2 template or the measured area if the area is an irregular surface. The area was wiped completely twice, from left to right and then from top to bottom. For waxed surfaces such as floors the wetting agent used is de-ionized water or distilled water because solvents used on waxed surfaces will not give an accurate analysis for PCB's. The wipe media was then inserted into a 6 ounce sterilized glass vial and delivered to the laboratory.

The following table summarizes the inspection results:

Table 1.0 PCB Wipe Sample Results (after ballast removal)

Sample Id. No.	Location	Type of Surface Sampled	Sample Media	Detection Limit (ug/cm^2)	Result (ug/cm^2)
01	Blank	Blank	Gauze Pad w/ hexane or reagent acetone	3	<3
02	Room #224	Floor @ impacted area marked with tape (x=13, y=27)	Gauze Pad w/ deionized water	0.03	<0.03
03	Room #224	Floor @ impacted area marked with tape (x=19, y=28)	Gauze Pad w/ deionized water	0.03	<0.03

Sample Id. No.	Location	Type of Surface Sampled	Sample Media	Detection Limit (ug/cm²)	Result (ug/cm²)
04	Room #224	Floor @ impacted area marked with tape (x=20, y=27)	Gauze Pad w/ deionized water	0.03	<0.03
05	Room #224	Floor @ impacted area marked with tape (x=22, y=28)	Gauze Pad w/ deionized water	0.03	<0.03
06	Room #224	Floor @ impacted area marked with tape (x=17, y=23)	Gauze Pad w/ deionized water	0.03	<0.03

CONCLUSIONS

Wipe samples obtained from floor within Room #224 show PCB concentrations to be below the detection limit.

Cardno ATC is pleased to be of service to the New York City Department of Education. Please feel free to contact us at (212) 353 8280 ext. 268 if you should have any questions or comments concerning this report.

Cardno ATC

Mike Balota
Project Manager

Appendixes: A- PCB Data and Chain of Custody Forms
B- PCB Analytical Results
C- Laboratory Certifications
D- NYC DOE Work Order Request

APPENDIX A

PCB DATA AND CHAIN OF CUSTODY FORMS

Cardno ATC
Shaping the Future

2133214

C 2978

PCB WIPE SAMPLING COC

PROJECT INFORMATION

1. Client:	2. Project Name: PS 157X	3a. ATC Project No.: 42672. 3188	4a. Project Manager: Dragos Balota
NYC-DOE	2a. Project Address: 757 CALDWELL AVE BRNX.	3b. Task No.: 0001 ~~54672~~ 1	4b. Inspector: Sydney Williams
5. Date: 10-8-13	6. Building Name: PS157X 7. Location: Room # Room 224	8. Turnaround Time: **RUSH (6 hours or less)**	9. Comments (Field) Analyze all samples via 8082 Method.

WIPE SAMPLE LOCATION

10. Sample ID No.	11. LAB ID No.	12. Room No.	13A. Surface Sampled	13B. Sample Coordinates (x and y)	14. MEDIA	15. Area Sampled (cm²)	16. MDL (ug/ cm²)	16A. RESULT (ug/ cm²)
1		←	BLANK	→	Gauze Pad w/ Hexane	→	3 ug	< 3 ug
2		224	12"x12" Blue Vinyl Floor	X – 13' Y – 27'	Gauze Pad with Delon H2O	100	0.03	< 0.03
3		224	12x12 Blue Vinyl Tile Floor	X – 19' Y – 28	Gauze Pad with Delon H2O	100	0.03	< 0.03
4		224	12x12" Blue Vinyl Tile Floor	X – 20 Y – 27	Gauze Pad with Delon H2O	100	0.03	< 0.03
5		224	12x12' Blue Vinyl Tile Floor	X – 22 Y – 28	Gauze Pad with Delon H2O	100	0.03	< 0.03
6		224	12' x 12' Blue Vinyl Tile Floor	X – 17 Y – 23	Gauze Pad with Delon H2O	100	0.03	< 0.03

CHAIN OF CUSTODY

17. Relinquished By	18. Date	19. Time	20. Received By	21. Date	22. Time	23. Method of Submittal	
I. Sydney Williams	10.8.13	1420		10-8-13	1420	Field	
II.			Zhaojing Bao	10/8/13	15:20	Walk In	✓
III.						US Mail	
						Fed-Ex	
						Other	

LABORATORY INFORMATION

24. Name and Signature: Zhaojing Bao	25. Date	26 Time	27. Comments:
24a. Analyzed By:			**Please email results to dragos.balota@cardno.com**
24b. Analyzed By:			
24c. QC By:			

APPENDIX B

PCB ANALYTICAL RESULTS

NEW YORK ENVIRONMENTAL

88 HARBOR ROAD
PORT WASHINGTON, NY 11050
(516) 944-9500 • FAX (516) 944-9507
www.nyenvironmental.com

CLIENT:	Cardno ATC 104 E. 25 St. 10th fl. New York, NY 10011	**REPORT NO.** **PROJECT NO.**	2133214 39112
	42672.3188	**SAMPLED:** **RECEIVED:**	10/8/13 10/8/13
PROJECT:	X157 757 Caudwell Ave., Bronx	**ANALYZED:** **REPORTED:**	10/8/13 10/9/13

ANALYTICAL REPORT

PCB WIPE

GC/ECD (USEPA Method 8082)

COMPOSITED SAMPLE ID: **01** BATCH NO. **C2978-1**
MATRIX: SURFACE WIPE
SAMPLE LOCATION: **BLANK**

TYPE OF PCB	CAS NO.	RESULT (µg)	MINIMUM DETECTION LIMIT (µg)
PCB 1016	12674-11-2	<3	3
PCB 1221	11104-28-2	<3	3
PCB 1232	11141-16-5	<3	3
PCB 1242	53469-21-9	<3	3
PCB 1248	12672-29-6	<3	3
PCB 1254	11097-69-1	<3	3
PCB 1260	11096-82-5	<3	3

VERNE TSANG
CHEMIST

LI TSANG
LABORATORY DIRECTOR

The report relates only to the items tested, as received by the laboratory. This report cannot be used in part and may only be used in full with this laboratory's approval. This report must not be used in any way to claim product endorsement by New York Environmental and ELAP of NYSDOH.

NYSDOH ELAP #: 11510

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	42672.3188	**SAMPLED:** **RECEIVED:**	10/8/13 10/8/13
PROJECT:	X157 757 Caudwell Ave., Bronx	**ANALYZED:** **REPORTED:**	10/8/13 10/9/13

ANALYTICAL REPORT

PCB WIPE

GC/ECD (USEPA Method 8082)

COMPOSITED SAMPLE ID: **02** BATCH NO. **C2978-2**
MATRIX: SURFACE WIPE
SAMPLE LOCATION: **Room 224 (12"x12" Blue Vinyl Floor)**

TYPE OF PCB	CAS NO.	RESULT ($\mu g/cm^2$)	MINIMUM DETECTION LIMIT ($\mu g/cm^2$)
PCB 1016	12674-11-2	<0.03	0.03
PCB 1221	11104-28-2	<0.03	0.03
PCB 1232	11141-16-5	<0.03	0.03
PCB 1242	53469-21-9	<0.03	0.03
PCB 1248	12672-29-6	<0.03	0.03
PCB 1254	11097-69-1	<0.03	0.03
PCB 1260	11096-82-5	<0.03	0.03

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	42672.3188	**SAMPLED:** **RECEIVED:**	10/8/13 10/8/13
PROJECT:	X157 757 Caudwell Ave., Bronx	**ANALYZED:** **REPORTED:**	10/8/13 10/9/13

ANALYTICAL REPORT

PCB WIPE

GC/ECD (USEPA Method 8082)

COMPOSITED SAMPLE ID: **03** BATCH NO. **C2978-3**
MATRIX: SURFACE WIPE
SAMPLE LOCATION: **Room 224 (12"x12" Blue Vinyl Floor Tile)**

TYPE OF PCB	CAS NO.	RESULT ($\mu g/cm^2$)	MINIMUM DETECTION LIMIT ($\mu g/cm^2$)
PCB 1016	12674-11-2	<0.03	0.03
PCB 1221	11104-28-2	<0.03	0.03
PCB 1232	11141-16-5	<0.03	0.03
PCB 1242	53469-21-9	<0.03	0.03
PCB 1248	12672-29-6	<0.03	0.03
PCB 1254	11097-69-1	<0.03	0.03
PCB 1260	11096-82-5	<0.03	0.03

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CLIENT:	Cardno ATC 104 E. 25 St. 10th fl. New York, NY 10011	**REPORT NO.** **PROJECT NO.**	2133214 39112
	42672.3188	**SAMPLED:** **RECEIVED:**	10/8/13 10/8/13
PROJECT:	X157 757 Caudwell Ave., Bronx	**ANALYZED:** **REPORTED:**	10/8/13 10/9/13

ANALYTICAL REPORT

PCB WIPE

GC/ECD (USEPA Method 8082)

COMPOSITED SAMPLE ID: **04** BATCH NO. **C2978-4**
MATRIX: SURFACE WIPE
SAMPLE LOCATION: **Room 224 (12"x12" Blue Vinyl Floor Tile)**

TYPE OF PCB	CAS NO.	RESULT ($\mu g/cm^2$)	MINIMUM DETECTION LIMIT ($\mu g/cm^2$)
PCB 1016	12674-11-2	<0.03	0.03
PCB 1221	11104-28-2	<0.03	0.03
PCB 1232	11141-16-5	<0.03	0.03
PCB 1242	53469-21-9	<0.03	0.03
PCB 1248	12672-29-6	<0.03	0.03
PCB 1254	11097-69-1	<0.03	0.03
PCB 1260	11096-82-5	<0.03	0.03

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CLIENT:	Cardno ATC 104 E. 25 St. 10th fl. New York, NY 10011	**REPORT NO.** **PROJECT NO.**	2133214 39112
	42672.3188	**SAMPLED:** **RECEIVED:**	10/8/13 10/8/13
PROJECT:	X157 757 Caudwell Ave., Bronx	**ANALYZED:** **REPORTED:**	10/8/13 10/9/13

ANALYTICAL REPORT

PCB WIPE

GC/ECD (USEPA Method 8082)

COMPOSITED SAMPLE ID: **05** BATCH NO. **C2978-5**
MATRIX: SURFACE WIPE
SAMPLE LOCATION: **Room 224 (12"x12" Blue Vinyl Floor Tile)**

TYPE OF PCB	CAS NO.	RESULT ($\mu g/cm^2$)	MINIMUM DETECTION LIMIT ($\mu g/cm^2$)
PCB 1016	12674-11-2	<0.03	0.03
PCB 1221	11104-28-2	<0.03	0.03
PCB 1232	11141-16-5	<0.03	0.03
PCB 1242	53469-21-9	<0.03	0.03
PCB 1248	12672-29-6	<0.03	0.03
PCB 1254	11097-69-1	<0.03	0.03
PCB 1260	11096-82-5	<0.03	0.03

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	42672.3188	**SAMPLED:** **RECEIVED:**	10/8/13 10/8/13
PROJECT:	X157 757 Caudwell Ave., Bronx	**ANALYZED:** **REPORTED:**	10/8/13 10/9/13

ANALYTICAL REPORT

PCB WIPE

GC/ECD (USEPA Method 8082)

COMPOSITED SAMPLE ID: **06** BATCH NO. **C2978-6**
MATRIX: SURFACE WIPE
SAMPLE LOCATION: **Room 224 (12"x12" Blue Vinyl Floor Tile)**

TYPE OF PCB	CAS NO.	RESULT ($\mu g/cm^2$)	MINIMUM DETECTION LIMIT ($\mu g/cm^2$)
PCB 1016	12674-11-2	<0.03	0.03
PCB 1221	11104-28-2	<0.03	0.03
PCB 1232	11141-16-5	<0.03	0.03
PCB 1242	53469-21-9	<0.03	0.03
PCB 1248	12672-29-6	<0.03	0.03
PCB 1254	11097-69-1	<0.03	0.03
PCB 1260	11096-82-5	<0.03	0.03

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NYSDOH ELAP #: 11510

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Page 1 of 1

2133214

C2978

PCB WIPE SAMPLING COC

PROJECT INFORMATION

1. Client:	2. Project Name: PS 157X	3a. ATC Project No.: 42672. 3188	4a. Project Manager: Dragos Balota
NYC-DOE	2a. Project Address: 757 CALDWELL AVE BRNX.	3b. Task No.: 0001 ~~42672~~ 1	4b. Inspector: Sydney Williams
5. Date: 10-8-13	6. Building Name: PS157X 7. Location: Room # Room 224	8. Turnaround Time: **RUSH (6 hours or less)**	9. Comment s (Field) Analyze all samples via 8082 Method.

WIPE SAMPLE LOCATION

10. Sample ID No.	11. LAB ID No.	12. Room No.	13A. Surface Sampled	13B. Sample Coordinates (x and y)	14. MEDIA	15. Area Sampled (cm²)	16. MDL (ug/ cm²)	16A. RESULT (ug/ cm²)
1		←	BLANK	———	Gauze Pad w/ Hexane	→	3 ug	< 3 ug
2		224	12"X12" Blue Vinyl Floor	X – 13' Y – 27'	Gauze Pad with Delon H20	100	0.03	< 0.03
3		224	12X12 Blue Vinyl Tile Floor	X – 19' Y – 28	Gauze Pad with Delon H20	100	0.03	< 0.03
4		224	12'X12" Blue Vinyl Tile Floor	X – 20 Y – 27	Gauze Pad with Delon H20	100	0.03	< 0.03
5		224	12'X12' Blue Vinyl Tile Floor	X – 20 Y – 27	Gauze Pad with Delon H20	100	0.03	< 0.03
6		224	12' X12' Blue Vinyl Tile Floor	X – 17 Y – 23	Gauze Pad with Delon H20	100	0.03	< 0.03

CHAIN OF CUSTODY

17. Relinquished By	18. Date	19. Time	20. Received By	21. Date	22. Time	23. Method of Submittal	
I. Sydney Williams	10.8.13	1420		10-8-13	1420	Field	
II.			Zhaojing Bai	10/8/13	15:20	Walk In	✓
III.						US Mail	
						Fed-Ex	
						Other	

LABORATORY INFORMATION

24. Name and Signature: Zhaojing Bai	25. Date	26 Time	27. Comments:
24a. Analyzed By:			**Please email results to dragos.balota@cardno.com**
24b. Analyzed By:			
24c. QC By:			

APPENDIX C

LABOARTORY CERTIFICATIONS

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2014
Issued April 01, 2013

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

NY Lab Id No: 11510

MR. LI TSANG
NY ENVIRONMENTAL AND ANALYTICAL LABS INC
88 HARBOR ROAD
PORT WASHINGTON, NY 11050

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:

Characteristic Testing	
TCLP	EPA 1311
Polychlorinated Biphenyls	
PCB-1016	EPA 8082
PCB-1221	EPA 8082
PCB-1232	EPA 8082
PCB-1242	EPA 8082
PCB-1248	EPA 8082
PCB-1254	EPA 8082
PCB-1260	EPA 8082
Sample Preparation Methods	
	EPA 3550B

Serial No.: 48693

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

APPENDIX D

NYC DOE WORK ORDER REQUEST

Facility: DSF DIVISION OF SCHOOL FACILITIES
Unit : X Project :
W/O Type: CO Priority: 04 W/O Dspln: H
Planner : MDELMON2 DELMONICO
W/O Title : 75/07X157/ INSPECT / REMOVE FAILED T
W/O Task Title: 75/07X157/ PERFORM PCM AIR TEST - OD
Written To : P.S. 157 (D7) - BRONX
Task Dspln : Completed By:

Work Order Package

00511878 04

Rpt : TIPMC11
Date: 10/03/2013

NEW YORK CITY DEPT. OF EDUCATION

Work Order Task Written To

Facility : DSF
Division :
Equipment : ABLDG X157
Work Item :
Equip. Tag:
UTC :
Catalog ID:
Client/Act: TKOS0642
Location : X02 62500001 000001 757 CAULDWELL AV, BRONX, NY 10456
Cost Centr: G839
Percentage: 100.000

Unit : X
Area : ISC1
Component:
Eqt. List:
Alt:
Tbl/Brkdwn: (Past 12 mo)
Job Type : ET UCR: LB14
THOMAS KOSSOMEDES
Activity :
Acct No. : GL

Op Sys : GEO-07
Sys/Cls: X157
Ops Review Reqd: N
User Def:

Work Order Task Instructions

PERFORM PCM AIR TEST - ODOR ONLY
LOC: CLASSROOM 224. 3- FIXTURES. ODOR ONLY.
Custodian MICHAEL TIERNEY 718-402-8085
`````
BERNIE SENT JOB TO ATC RUN PCM AIR TEST 10/03/13.

## *Completion Comments on Work Performed*

Completion Comments Required : N

Comments:

Comments:

Comments:

Continued on Additional Sheets? : _____
`````