

March 15, 2013

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

**Re: PCB Wipe Sampling Report  
P.S. 305K  
Cardno ATC Project: No. 42672.1698  
Work Order No. 00495618 02**

Dear Mr. Orlan:

Cardno ATC was retained by NYC-DOE to perform a limited PCB wipe sampling inspection at P.S. 305K, located at 344 Monroe Street, Brooklyn, NY 11216. The inspection was performed by Mr. Kayik Hung on March 14, 2013 and it was limited to wipe samples collection and analysis to determine if any surface within Room #306 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<sup>2</sup>) 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 three (3) samples (two surface samples and one blank) within Room #306 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<sup>2</sup> 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 <sup>2</sup> )	Result (ug/cm <sup>2</sup> )
01	Blank	Blank	Gauze Pad w/ hexane or reagent acetone	3.5	<3.5
02	Room #306	Student's Desk	Gauze Pad w/ hexane or reagent acetone	0.035	<0.035
03	Room #306	Floor (9x9 vinyl floor tiles)	Gauze Pad w/ deionized water	0.035	<0.035

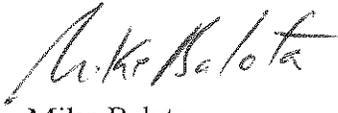
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## CONCLUSIONS

Wipe samples obtained from student's desk and floor within Room #306 show PCB concentrations to be below the Federal action level of 10ug/cm<sup>2</sup>.

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

## PCB WIPE SAMPLING COC

38205

### PROJECT INFORMATION

1. Client: <b>NYC-DOE</b>	2. Project Name: <b>P.S. 305K</b>	3a. ATC Project No.: <b>015.42672.1696</b>	4a. Project Manager: <b>Dragos Balota</b>
	2a. Project Address: <b>344 Monroe St., Brooklyn, NY 11216</b>	3b. Task No.: <b>0001</b>	4b. Inspector: <b>Kayik Hung</b>
5. Date: <b>03/14/13</b>	6. Building Name: <b>P.S. 305K</b>	8. Turnaround Time: <b>RUSH (6 hours or less)</b>	
	7. Location: <b>306</b>	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 (cm <sup>2</sup> )	16. MDL (ug/ cm <sup>2</sup> )	16A. RESULT (ug/ cm <sup>2</sup> )
01			Blank	Blank	Gauze Pad w/ Hexane	Blank	3.5 ug	< 3.5 ug
02		306	Student's Desk	X 16.8 Y 23.07	Gauze Pad with Hexane	100 cm <sup>2</sup>	0.035	< 0.035
03		306	9x9 Dark Beige Floor tiles	X 18.0 Y 23.5	Deionized water	100 cm <sup>2</sup>	0.035	< 0.035

0130537  
  
6 2 5 9 9

### CHAIN OF CUSTODY

17. Relinquished By	18. Date	19. Time	20. Received By	21. Date	22. Time	23. Method of Submittal
i. <b>Kayik Hung</b>	<b>03/14/13</b>	<b>2:00 pm</b>	<b>Sarah Emmel</b>	<b>3-14-13</b>	<b>1400</b>	Field
ii.						Walk In
iii.						US Mail
						Fed-Ex
						Other

### LABORATORY INFORMATION

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

Dnd  
(9x9 Beige Walk)

## APPENDIX B

### PCB ANALYTICAL RESULTS

<b>CLIENT:</b>	Cardno ATC 104 E. 25 St. 10th fl. New York, NY 10011	<b>REPORT NO.</b>	2130537
		<b>PROJECT NO.</b>	38305
	015.42672.1696	<b>SAMPLED:</b>	3/14/13
<b>PROJECT:</b>	PS 305K	<b>RECEIVED:</b>	3/14/13
	344 Monroe St., Brooklyn, NY 11216	<b>ANALYZED:</b>	3/14/13
		<b>REPORTED:</b>	3/14/13

ANALYTICAL REPORT

**PCB WIPE**  
 GC/ECD (EPA METHOD 8082)

COMPOSITED SAMPLE ID: 01  
 MATRIX: SURFACE WIPE  
 SAMPLE LOCATION: **Blank**

BATCH NO. C2599-1

TYPE OF PCB	CAS NO.	RESULT (ug)	MINIMUM DETECTION LIMIT (ug)
PCB 1016	12674-11-2	<3.5	3.5
PCB 1221	11104-28-2	<3.5	3.5
PCB 1232	11141-16-5	<3.5	3.5
PCB 1242	53469-21-9	<3.5	3.5
PCB 1248	12672-29-6	<3.5	3.5
PCB 1254	11097-69-1	<3.5	3.5
PCB 1260	11096-82-5	<3.5	3.5



NICOLE CHEUNG  
 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.

**CLIENT:** Cardno ATC  
104 E. 25 St. 10th fl.  
New York, NY 10011

**REPORT NO.** 2130537  
**PROJECT NO.** 38305

**PROJECT:** 015.42672.1696  
PS 305K  
344 Monroe St., Brooklyn, NY 11216

**SAMPLED:** 3/14/13  
**RECEIVED:** 3/14/13  
**ANALYZED:** 3/14/13  
**REPORTED:** 3/14/13

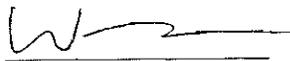
**ANALYTICAL REPORT**

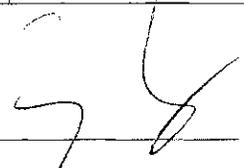
**PCB WIPE**  
**GC/ECD (EPA METHOD 8082)**

COMPOSITED SAMPLE ID: 02  
MATRIX: SURFACE WIPE  
SAMPLE LOCATION: **Room 306 (Student's Desk)**

BATCH NO. C2599-2

TYPE OF PCB	CAS NO.	RESULT (ug/cm <sup>2</sup> )	MINIMUM DETECTION LIMIT (ug/cm <sup>2</sup> )
PCB 1016	12674-11-2	<0.035	0.035
PCB 1221	11104-28-2	<0.035	0.035
PCB 1232	11141-16-5	<0.035	0.035
PCB 1242	53469-21-9	<0.035	0.035
PCB 1248	12672-29-6	<0.035	0.035
PCB 1254	11097-69-1	<0.035	0.035
PCB 1260	11096-82-5	<0.035	0.035

  
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## APPENDIX C

### LABOARTORY CERTIFICATIONS

NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER

Expires 12:01 AM April 01, 2013  
Issued April 1, 2012



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.

Polychlorinated Biphenyls

PCB-1016	EPA 8082
PCB-1221	EPA 8082
PCB-1232	EPA 8082
PCB-1242	EPA 8082
PCB-1278	EPA 8082
PCB-1254	EPA 8082
PCB-1260	EPA 8082

Sample Preparation Methods

EPA 1631

Serial No.: 46385

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) 485-6570 to verify the laboratory's accreditation status.



**APPENDIX D**

**NYC DOE WORK ORDER REQUEST**

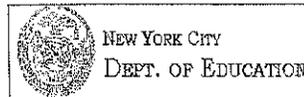
Facility: DSF DIVISION OF SCHOOL FACILITIES  
 Unit : K Project :  
 W/O Type: CO Priority: 04 W/O Dspln: H  
 Planner : FPALMER2 PALMER  
 W/O Title : 75/13K305/ BURNT & SMOKING T-12 BALL  
 W/O Task Title: 75/13K305/ PCB WIPE SAMPLES ROOM 306  
 Written To : P.S. 305 - BROOKLYN  
 Task Dspln : Completed By:



**Work Order Package**

00495618 02

Rpt : TIPMC11  
 Date: 03/13/2013



Page: 1

**Work Order Task Written To**

Facility : DSF	Unit : K	Op Sys : GEO-13
Division :	Area : ISC4	Sys/Cls: K305
Equipment : ABLDG K305	Component:	
Work Item :	Eqt. List:	Ops Review Req'd: N
Equip. Tag:	Alt:	
UTC :	Tbl/Brkdwn: (Past 12 mo)	
Catalog ID:	Job Type : CO UCR: LB13	
Client/Act:		
Location : K01 81900014 000001 344 MONROE ST, BROOKLYN, NY 11216		
Cost Centr: G839	Activity :	User Def:
Percentage: 100.000	Acct No. : GL	

**Work Order Task Instructions**

PCB WIPE SAMPLES ARE NEEDED IN ROOM 306 DUE TO BURNT  
 & SMOKING PCB BALLAST/LIGHT FIXTURE.  
 \*\*\*\*\*  
 BERNIE ASSIGN W/O TO ATC DO WIPE SAMPLES 03/13/13.

**Completion Comments on Work Performed**

Completion Comments Required : N

Comments:


Comments:


Comments:


Continued on Additional Sheets? : \_\_\_\_\_