March 5, 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. 228K
Cardno ATC Project: No. 42672.1636
Work Order No. 00494498 04

Dear Mr. Orlan:

Cardno ATC was retained by NYC-DOE to perform a limited PCB wipe sampling inspection at P.S. 228K, located at 228 Avenue S, Brooklyn, NY 11223. The inspection was performed by Mr. Michael Wang on March 2, 2013 and it was limited to wipe samples collection and analysis in Room #327 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 three (3) samples (two surface samples and one blank) within Room #327 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	4	<4
02	Room #327	Floor	Gauze Pad w/ deionized water	0.04	<0.04
03	Room #327	Teacher's Desk	Gauze Pad w/ hexane or reagent acetone	0.04	<0.04

CONCLUSIONS

Wipe samples obtained from teacher's desk and the floor within Room #327 showed PCB concentrations to be below the Federal action level of 10ug/cm^2.

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

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BATCH NO.

PCB WIPE SAMPLING COC

38079

PROJECT INFORMATION

1. Client: NYC-DOE	2. Project Name: K228	3a. ATC Project No.: 42672.1636	4a. Project Manager: Dragos Balota
	2a. Project Address: 228 AVE S 11223	3b. Task No.: 0001	4b. Inspector: M. WANG
5. Date: 3/2/13	6. Building Name: K228	8. Turnaround Time: **24 hours**	9. Comments (Field): Analyze all samples via 8082 Method.
	7. Location: RM. 327		

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. RESULT (ug/cm²)
01		N/A	BLANK		Gauze Pad w/ Hexane		< 4ug
02		RM. 327	WOOD FLOOR (WAXED)	X = 19 Y = 21	GAUZE w/ DEION. H2O	100	<0.04
03			FURNITURE (DESK)	X = 20 Y = 20.	GAUZE w/ HEXANE		<0.04

0130242
C2582

CHAIN OF CUSTODY

17. Relinquished By	18. Date	19. Time	20. Received By	21. Date	22. Time	23. Method of Submittal	
I.	3/2/13		S. Emmel	3/2/13		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 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.**	2130442 38272
	42672.1636	**SAMPLED:** **RECEIVED:**	3/2/13 3/2/13
PROJECT:	K228 228 Ave S, 11223	**ANALYZED:** **REPORTED:**	3/3/13 3/3/13

ANALYTICAL REPORT

PCB WIPE

GC/ECD (EPA METHOD 8082)

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

BATCH NO. **C2582-1**

TYPE OF PCB	CAS NO.	RESULT (ug)	MINIMUM DETECTION LIMIT (ug)
PCB 1016	12674-11-2	<4	4
PCB 1221	11104-28-2	<4	4
PCB 1232	11141-16-5	<4	4
PCB 1242	53469-21-9	<4	4
PCB 1248	12672-29-6	<4	4
PCB 1254	11097-69-1	<4	4
PCB 1260	11096-82-5	<4	4

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.

NYSDOH ELAP #: 11510

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		SAMPLED:	3/2/13
	42672.1636	**RECEIVED:**	3/2/13
PROJECT:	K228 228 Ave S, 11223	**ANALYZED:** **REPORTED:**	3/3/13 3/3/13

ANALYTICAL REPORT

PCB WIPE

GC/ECD (EPA METHOD 8082)

COMPOSITED SAMPLE ID: **02** BATCH NO. **C2583-2**
MATRIX: SURFACE WIPE
SAMPLE LOCATION: **Rm 327 (Wood Floor, Waxed)**

TYPE OF PCB	CAS NO.	RESULT (ug/cm^2)	MINIMUM DETECTION LIMIT (ug/cm^2)
PCB 1016	12674-11-2	<0.04	0.04
PCB 1221	11104-28-2	<0.04	0.04
PCB 1232	11141-16-5	<0.04	0.04
PCB 1242	53469-21-9	<0.04	0.04
PCB 1248	12672-29-6	<0.04	0.04
PCB 1254	11097-69-1	<0.04	0.04
PCB 1260	11096-82-5	<0.04	0.04

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		SAMPLED:	3/2/13
	42672.1636	**RECEIVED:**	3/2/13
PROJECT:	K228 228 Ave S, 11223	**ANALYZED:** **REPORTED:**	3/3/13 3/3/13

ANALYTICAL REPORT

PCB WIPE

GC/ECD (EPA METHOD 8082)

COMPOSITED SAMPLE ID: **03** BATCH NO. **C2583-3**
MATRIX: SURFACE WIPE
SAMPLE LOCATION: **Rm 327 (Furniture, Desk)**

TYPE OF PCB	CAS NO.	RESULT (ug/cm^2)	MINIMUM DETECTION LIMIT (ug/cm^2)
PCB 1016	12674-11-2	<0.04	0.04
PCB 1221	11104-28-2	<0.04	0.04
PCB 1232	11141-16-5	<0.04	0.04
PCB 1242	53469-21-9	<0.04	0.04
PCB 1248	12672-29-6	<0.04	0.04
PCB 1254	11097-69-1	<0.04	0.04
PCB 1260	11096-82-5	<0.04	0.04

NICOLE CHEUNG
CHEMIST

LI TSANG
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NYSDOH ELAP #: 11510

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-1248	EPA 8082
PCB-1254	EPA 8082
PCB-1260	EPA 8082

Sample Preparation Methods

	EPA 3511

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) 485-5570 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 : DSCANNA SCANNAPIECO
W/O Title : 75/21K2287 / BURNT OUT & SMOKING (I)
W/O Task Title: 75/22K864/ PERFORM PCB WIPE SAMPLING
Written To : P.S. 361 (OLD 89) - BROOKLYN
Task Dspln : Completed By:

Work Order Package

00494498 04

Rpt : TIPMC11
Date: 03/01/2013

NEW YORK CITY
DEPT. OF EDUCATION

Page: 1

Work Order Task Written To

K228 228 Ave S

Facility : DSF
Division :
Equipment : ABLDG K864
Work Item :
Equip. Tag:
UTC :
Catalog ID:
Client/Act: LFIO2632
Location : K04 96500001 000001 3109 NEWKIRK AV, BROOKLYN, NY 11226
Cost Centr: G839
Percentage: 100.000

Unit : K
Area : ISC5
Component:
Eqt. List:
Alt:
Tbl/Brkdwn: (Past 12 mo)
Job Type : EA UCR: LB13
LISA FIOTO
Activity :
Acct No. : GL

Op Sys : GEO-22
Sys/Cls: K864
Ops Review Reqd: N
User Def:

Work Order Task Instructions

PERFORM PCB WIPE SAMPLING IN ROOM #327 DUE TO A SMOKING BALLAST.
Custodian: G.Gentile 718 998-3402
`` ``

BERNIE ASSIGN W/O TO ATC 03/01/13 (WIPE SAMPLES).
CONSULTANT MUST CALL BERNIE WHILE ON SITE @ 347-386-4418.

Completion Comments on Work Performed

Completion Comments Required : N

Comments:

Comments:

Comments:

Continued on Additional Sheets? : _____