

March 26, 2015

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
J.H.S. 45M
Cardno ATC Project: No. Z214DB-6594
Work Order No. 00570638 04**

Dear Mr. Orlan:

Cardno ATC was retained by NYC-DOE to perform a limited PCB wipe sampling inspection at M045 located at 2351 1st Avenue, New York, NY 10035. The inspection was performed by Mr. Diego Lopez on March 26, 2015 and it was limited to wipe samples collection and analysis within Room #103 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 (cm²) 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 #103 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 cm² 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 #103 | Floor- 9x9 beige VFT (x=14.07, y=6.11) | Gauze Pad w/ deionized water | 0.03 | <0.03 |
| 03 | Room #103 | Floor- 9x9 beige VFT (x=15.01, y=5.01) | Gauze Pad w/ deionized water | 0.03 | <0.03 |

CONCLUSIONS

Wipe samples obtained from floor within Room #103 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

PCB WIPE SAMPLING COC

PROJECT INFORMATION

| | | | |
|------------------------------|--|--|--|
| 1. Client: NYC-DOE | 2. Project Name: MO45 | 3a. ATC Project No.: Z214DB. 659A | 4a. Project Manager: Dragos Balota |
| | 2a. Project Address: 2351 Avenue | 3b. Task No.: 0001 | 4b. Inspector: Diego Lopez |
| 5. Date: 3/25/15 | 6. Building Name: 110 | 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 (cm ²) | 16. MDL (ug/ cm ²) | 16A. RESULT (ug/ cm ²) |
|-------------------|----------------|--------------|-----------------------|--|------------------------|-------------------------------------|--------------------------------|------------------------------------|
| 01 | | | | | Gauze Pad w/ Hexane | / | 3 ug | < 3.09 |
| 02 | | 103 | Pool VFT 999 Beige | X=14'07 Y=6'11 | DEION H ₂ O | 100cm ² | 0.03 | < 0.03 |
| 03 | | 103 | ↓ ↓ | X=15'01 Y=5'01 | ↓ | ↓ | 0.03 | < 0.03 |
| | | | | 2150821 | | | | |
| | | | |  0 5 8 9 9 | | | | |

CHAIN OF CUSTODY

| 17. Relinquished By | 18. Date | 19. Time | 20. Received By | 21. Date | 22. Time | 23. Method of Submittal |
|---------------------|----------------|-------------|--------------------|----------------|-------------|---|
| I. D. Lopez | 3/25/15 | 1830 | [Signature] | 3/25/15 | 1830 | Field Walk In <input checked="" type="checkbox"/> |
| II. | | | | | | US Mail <input type="checkbox"/> |
| III. | | | | | | Fed-Ex <input type="checkbox"/> |
| | | | | | | Other <input type="checkbox"/> |

LABORATORY INFORMATION

| | | | |
|-------------------------------------|----------------|-------------|--|
| 24. Name and Signature: | 25. Date | 26. Time | 27. Comments: Please email results to dragos.balota@cardno.com |
| 24a. Analyzed By: Wai S Wang | 3/26/15 | 0900 | |
| 24b. Analyzed By: | | | |
| 24c. QC By: | | | |

APPENDIX B

PCB ANALYTICAL RESULTS

Client: Cardno ATC
 104 E. 25th Street, 10th Floor
 New York, NY 10011

Report No.: 2150821
Project No.: 42585

Project: M045 – Z214DB.6594
 2351 1st Avenue
 New York, NY

Sampled: 03/25/15
Received: 03/25/15
Analyzed: 03/25/15
Reported: 03/26/15

**Analytical Report for
 Total PCBs by GC/ECD**
 EPA Method 3550C (prep) 8082A (analysis)

Composite Sample ID 01
 Matrix: WIPE
 Sample Location: BLANK

Lab Batch No. C5899-1

| PCB ID | CAS No. | Result (ug) | MDL (ug) |
|----------|------------|-------------|----------|
| 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 |


 Nicole Cheung
 Chemist


 Li Tsang
 Laboratory Director

LT:eb

The analytical results related only to the samples tested in the condition received by the laboratory. This report must not be reproduced except in its entirety unless with the laboratory's written approval.

PCB WIPE SAMPLING COC

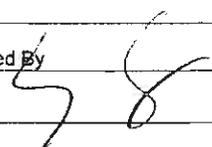
PROJECT INFORMATION

| | | | |
|------------------------------|---|--|--|
| 1. Client: NYC-DOE | 2. Project Name: 1045 | 3a. ATC Project No.: Z214DB. 6594 | 4a. Project Manager: Dragos Balota |
| | 2a. Project Address: 251 AVENUE | 3b. Task No.: 0001 | 4b. Inspector: Diego Lopez |
| 5. Date: 3/25/15 | 6. Building Name: | 8. Turnaround Time: RUSH (6 hours or less) | 9. Comments (Field): Analyze all samples via 8082 Method. |
| | 7. Location: Room # 110 | | |

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 ²) | 16. MDL (ug/cm ²) | 16A. RESULT (ug/cm ²) |
|---|----------------|--------------|------------------------|-----------------------------------|------------------------|-------------------------------------|-------------------------------|-----------------------------------|
| 01 | | | | | Gauze Pad w/ Hexane | / | 3 ug | < 3.09 |
| 02 | | 103 | FLOOR UFT 9x9 Beige | X=14'07 Y=6'11 | DEION H ₂ O | 100cm ² | 0.03 | < 0.03 |
| 03 | | 103 | ↓ ↓ | X=15'01 Y=5'01 | ↓ | ↓ | 0.03 | < 0.03 |
| <p>2150821</p>  <p>05899</p> | | | | | | | | |

CHAIN OF CUSTODY

| 17. Relinquished By | 18. Date | 19. Time | 20. Received By | 21. Date | 22. Time | 23. Method of Submittal |
|---------------------|----------------|-------------|--|----------------|-------------|-------------------------|
| I. D. Lopez | 3/25/15 | 1830 |  | 3/25/15 | 1830 | Field Walk In |
| II. | | | | | | US Mail |
| III. | | | | | | Fed-Ex |
| | | | | | | Other |

LABORATORY INFORMATION

| | | | |
|-------------------------------------|----------------|-------------|--|
| 24. Name and Signature: | 25. Date | 26. Time | 27. Comments: Please email results to dragos.balota@cardno.com |
| 24a. Analyzed By: Wai S Wang | 3/26/15 | 0900 | |
| 24b. Analyzed By: | | | |
| 24c. QC By: | | | |

APPENDIX C

LABOARTORY CERTIFICATIONS

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 09, 2015
Issued April 01, 2014



CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

MR. LITSANG
NY ENVIRONMENTAL AND ANALYTICAL LABS INC
88 HARDOR ROAD
PORT WASHINGTON, NY 11050

NY Lab Id No. 11810

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-1010

EPA

PCB-1221

EPA

PCB-1232

EPA

PCB-1242

EPA

PCB-1246

EPA 8082A

PCB-1254

EPA 8082A

PCB-1260

EPA 8082A

Sample Preparation Methods

EPA 3630C



Serial No.: 50669

Property of the New York State Department of Health. Certificate is valid only in the address shown, must be conspicuously posted, and may printed on future orders. Continued accreditation depends on successful testing participation in the Program. Consumers are urged to call (518) 402-0070 to verify the laboratory's accreditation status.

APPENDIX D

NYC DOE WORK ORDER REQUEST

Facility: DSF DIVISION OF SCHOOL FACILITIES
 Unit : M Project :
 W/O Type: CO Task Pri: 04 Tsk Dspln: H
 Planner : JDIFFLE DIFFLEY
 W/O Title : 75/04M045/SMOKING BALLAST/
 W/O Task Title: 75/04M045/SMOKING BALLAST/
 Written To : J.H.S. 45 - MANHATTAN
 Completed By:

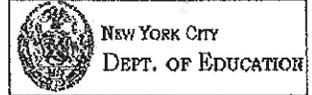


6594

Work Order Package

00570638 04

Rpt : TIPMC11
 Date: 03/26/2015



Page: 1

Work Order Task Written To

| | | |
|---|--------------------------|--------------------|
| Facility : DSF | Unit : M | Op Sys : GEO-04 |
| Division : | Area : ISC3 | Sys/Cls: M045 |
| Equipment : ABLDG M045 | Component: | |
| Work Item : | Eqt. List: | Ops Review Reqd: N |
| Equip. Tag: | Alt: | |
| UTC : | Tbl/Brkdwn: (Past 12 mo) | |
| Catalog ID: | Job Type : ET UCR: LB15 | |
| Client/Act: EMCC4315 | EDWARD MCCULLOUGH | |
| Location : M01 79700100 000001 2351 1ST AV, MANHATTAN, NY 10035 | | |
| Cost Centr: G839 | Activity : | User Def: |
| Percentage: 100.000 | Acct No. : GL | |

Work Order Task Instructions

WIPE TEST ROOM 103

 ASSIGNED TO ATC ON 3/25/15

Completion Comments on Work Performed

Completion Comments Required : N

Comments:

Comments:

Comments:

Continued on Additional Sheets? : _____