United Federation of Teachers
A Union of Professionals

PCBs in Schools

Chris Proctor, Director
Ed Olmsted, Industrial Hygienist
UFT Safety & Health Department

Historical

- Initial trigger was Daily News report on caulk sampled in various NYC public schools in March 2008

- Daily News Article Created Panic in Schools
  - Staff members reported chloracne, miscarriages and cancer
  - Requests for biological monitoring
  - Parent meetings were held at impacted schools
  - Confusion over PCB levels in caulk and exposure

DAILY NEWS

Historical

UFT contacted local, state and federal agencies for guidance

- NIOSH conducts HHE 2008-2009

In response to the UFT:

- the DOE Division of School Facilities(DSF)/SCA conducted wipe and air sampling in these schools

- DSF/SCA implemented more stringent dust controls and improved clean-up and housekeeping procedures for exterior masonry/window removal and replacement projects

- DSF developed a protocol for visually inspecting exterior and interior caulk; (April 19, 2012 EPA approves Draft Best Management Practices for PCB Caulk in NYC school buildings)

SCA Window Protocol

- Work done within containment areas
- Dust control measures implemented
- Work done only when school is not occupied
- Work includes testing of soil for PCBs
- Air monitoring and wipe sampling in an April 2008 pilot study indicated that work can be done safely using good dust control and cleanup

UNITED
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TEACHERS

PROTOCOL CHECKLIST

FOR

SCHOOL CONSTRUCTION AUTHORITY
CONSTRUCTION PROJECTS
IN
SCHOOLS

SCHOOL_____ DATE_____

UFT/SCA PCBs Protocol Checklist

13. PCBs – What precautions/procedures are used for PCB containing materials that will be disturbed?

a. **Are there T12 florescent light fixtures in the school that will be replaced** ?_____

b. **Is there PCB containing caulk**? _____

A. PCB containing light fixtures

a. Is there asbestos insulation on wiring that may be disturbed during removal of the light fixtures or ballasts. _____

b. Are there any signs of past leakage of tar or oil from the lights _____

c. Will the contents be removed from each room where lights will be replaced _____

d. Will plastic sheeting be placed on the floors and fixed objects when lights are replaced? _____

e. Will isolation barriers be installed in room where lights are to be replaced? _____

f. Will the area be cleaned after completion of the work and removal of the plastic sheeting? _____

g. Will the light fixture housing be removed? _____

h. Where will the materials be stored until removed from site AND will the storage area have no floor drain? _____

UFT/SCA PCBs Protocol Checklist cont.

B. PCB Caulk and other PCB containing building materials

a. Will dust isolation barriers and dust flaps be properly installed? _____

b. Will movable items be moved at least 5 feet from the work area? _____

c. Will immovable items be covered with plastic sheeting? _____

d. Will all functional spaces be inspected to document pre-existing conditions prior to starting the work? _____

e. Will a HEPA air purifier be properly placed and used during the project? _____

f. Will isolation barriers with dust flaps be maintained during the project? _____

C. What precautions will be taken to minimize dust generation, such as vacuum attachments on equipment, wet methods, etc? _____

D. What steps will be taken to ensure there is no visible dust outside of the isolation barrier during work? _____

E. Will the area be cleaned after removal of all poly and isolation barriers? _____

F. What procedures will be implemented if there is any visible dust after the final cleaning is complete? _____

G. Will a final inspection be performed by the Contractor and School Representative? _____

NYLPI LAWSUIT 2010

- Test all schools for PCB in caulk
- Consent Agreement & Final Order to conduct a pilot study in 5 schools
- Pilot study for PS 199M, PS 309K & PS 178X in summer 2010
- Results indicate PCBs Light Fixtures as the more significant concern

NYLPI
New York Lawyers for the Public Interest

Response to PCB Ballasts

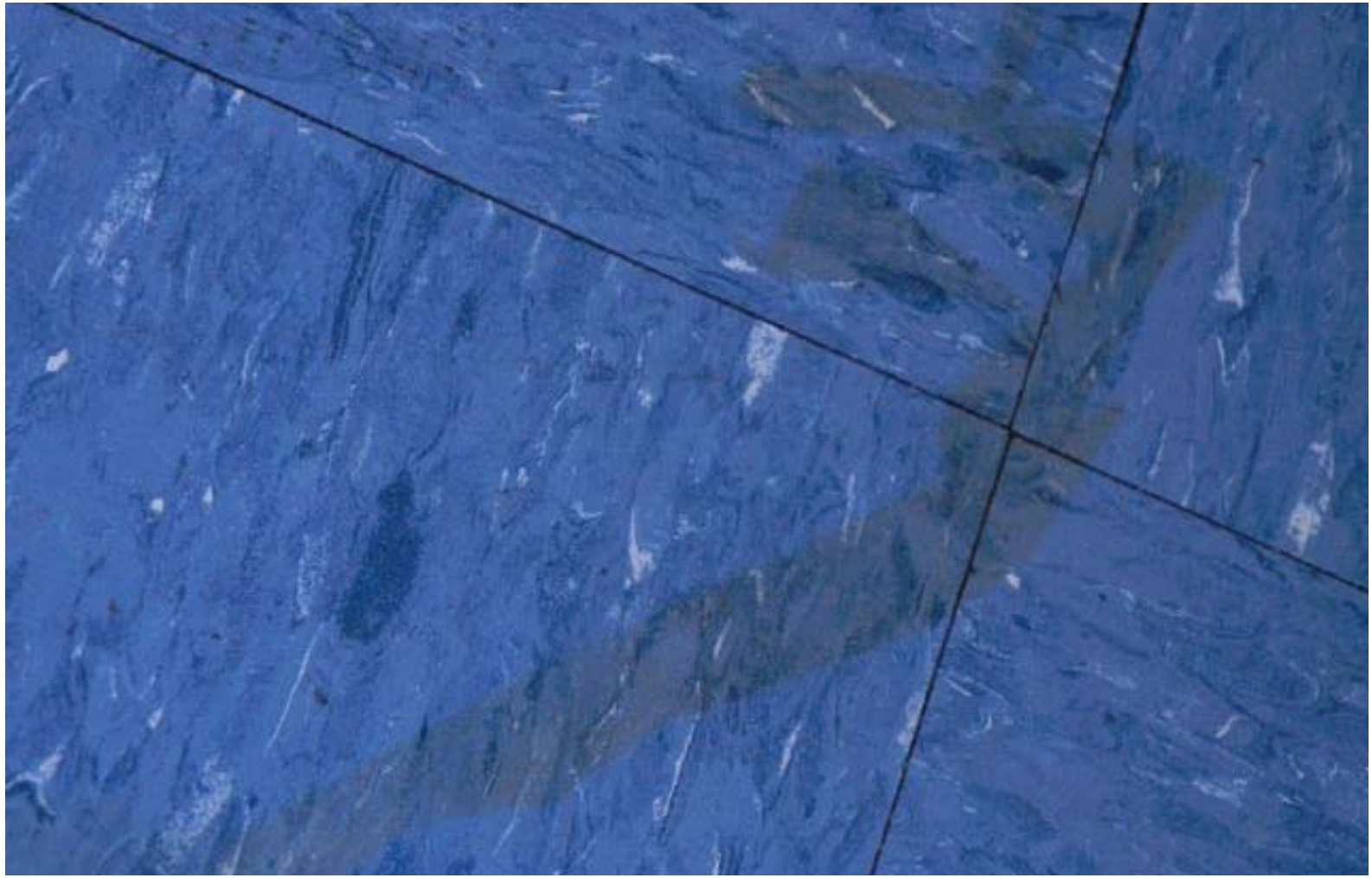
- September 2010 - UFT pressured DOE to develop program for upgrading all pre-1978 PCB light fixtures in schools
- Existing program for DCAS involved 15 to 20 schools each year.
- DOE and DOH concluded that there was not a significant health risk
- DOE had no plans to expedite PCB light fixture removal and replacement program

Incident in SI School PS 36R

- Oil dripped from burning light ballast staining fixture and floor below
- Teacher was told to clean up the material
- UFT conducts a site visit and requests EPA investigate
- Tests for PCBs are positive
- UFT meeting with parents and councilman in Staten Island UFT office.
- SCA inspects, removes and replaces the PS 36R light fixtures throughout the building

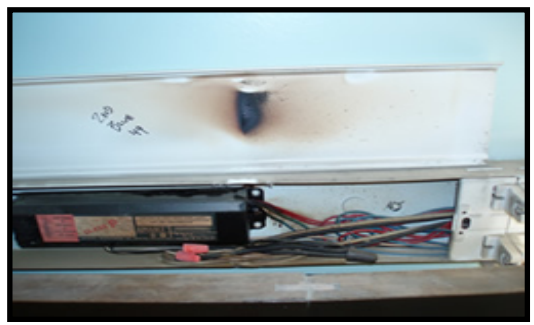
Light Fixture with PCB oil

PCB oil stains on floor tile



Light Ballasts

- PCB oil in the capacitor inside the ballast and sometimes in potting material in the ballast
- The capacitor can leak or overheat as the ballasts ages
- The PCB contaminated oil and potting material can drip into the fixture or to the floor below.
- The heating due to electrical failure can drive smoke including PCBs into the air



- Light fixture may still work with leaking ballast

Egg Crate Light Fixtures

Early 2011

- January and February 2011 EPA inspected 7 school buildings citywide on Saturdays and identifies leaking PCB ballasts in light fixtures
- Schools inspected by EPA and then the SCA revealed the majority of ballasts had already leaked.
- February 2011 DOE releases NYC Schools Comprehensive Plan that includes 10-year timeline for removal of PCB light fixtures in over 700 school buildings

EPA
United States Environmental Protection Agency

Removal of Fixtures

- Often the wiring has asbestos insulation
- NYCDEP worked with SCA and DCAS to develop a protocol for removing fixtures
- Room contents and surfaces were protected
- Ballasts disposed of as PCB waste
- Spring and Summer of 2011 was first round of light fixture projects as part of DOE's NYC Schools Comprehensive Plan

Work area protection

Negative pressure units

Replacing Lighting

- Eliminates PCB risk
- New fixtures improve illumination of the room
- Reduced electrical use saves energy and money

Pilot Study 2011

- Two more schools (Q183 and R003) were evaluated for a total of 5 schools

- Remediation method tested
  - Remove PCB lighting fixtures
  - Repair caulk, encapsulate caulk, remove caulk
  - Window replacement
  - Remediate soil

SCA School Construction Authority

TRC

NYC Department of Education

Patterns observed in the pilot study

- Pre- and post-remediation wipe samples were consistently below the EPA criteria (10 ug/100 cm2)
- Remediating caulk reduced potential exposure
- There was not a statistically significant change in pre- and post-remediation airborne PCB levels at the 4 pilot school buildings where interior PCB caulk remediation was done in summer 2011
- Removal of light fixtures has the most pronounced affect on reducing PCB levels in air

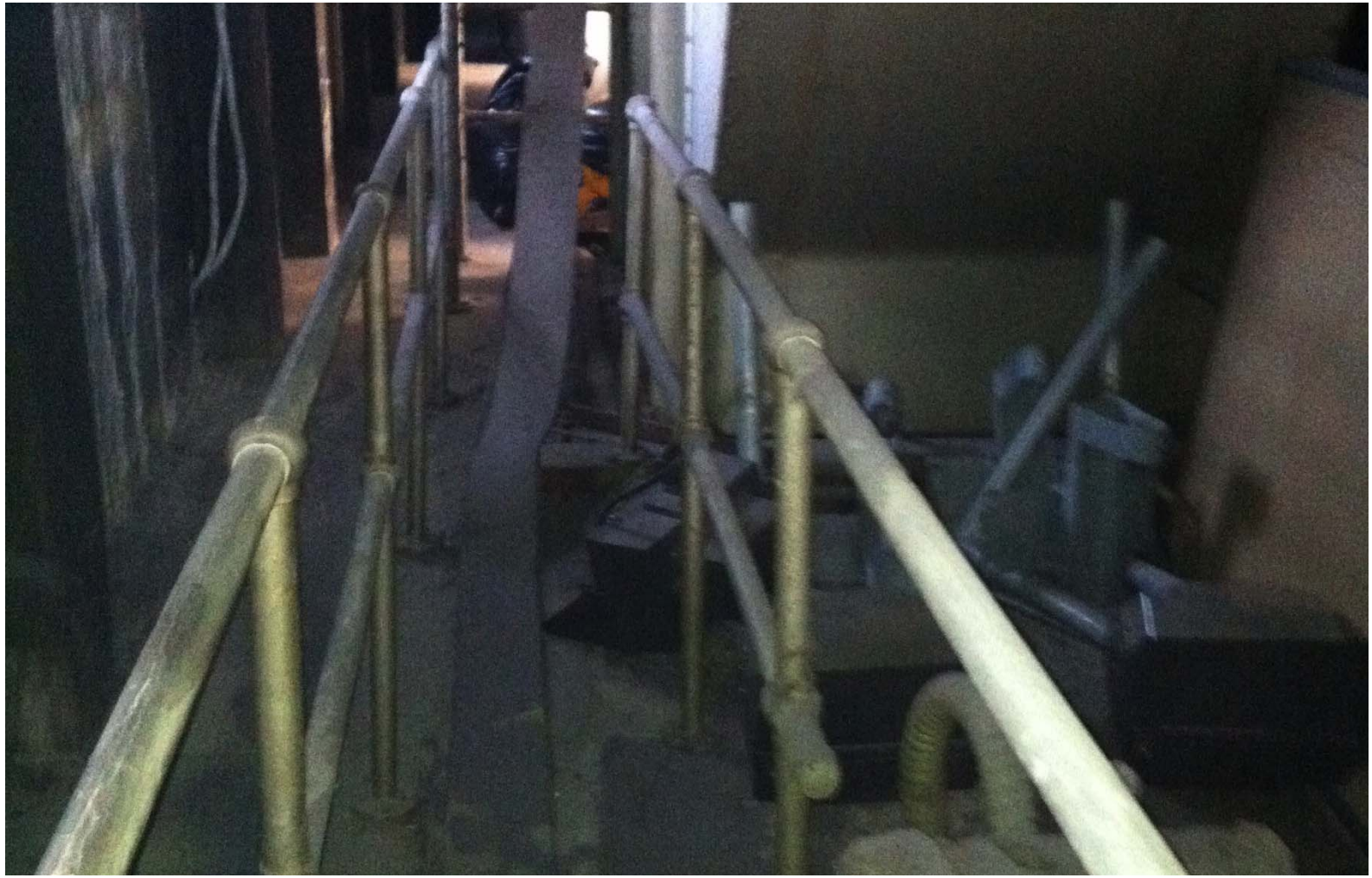
Patterns observed in the pilot study

- Ventilation is effective at reducing airborne PCB levels
- Where window removal is performed using good controls and critical cleaning by qualified contractor resulted in air sample results meeting EPA benchmarks

Current Practices in Schools with PCB Lighting fixtures

- Maintain ventilation systems in good working order
- Custodian inspects lights periodically
- When fixture fails and dripping material, smoke or burning odors are observed, the DOE protocol is to evacuate the room and an environmental contractor responds quickly to inspect and remove the light fixture.

Broken school exhaust fan



Failing lights due to bad ballast