Reassessment of Use Authorizations for PCBs in Small Capacitors (SAN 5256.1):

PCB Fluorescent Light Ballasts in Schools and Daycares

E.O. 13132: Federalism and UMRA: Consultation Meeting

July 28, 2016

Office of Pollution Prevention and Toxics

Consultation Purpose and Agenda

- Purpose:
  - To provide an overview of proposed changes to polychlorinated biphenyls (PCBs) use authorizations (40 CFR 761)
  - Answer questions and solicit feedback
- Agenda:
  - Overview of EO 13132: “Federalism” and Unfunded Mandates Reform Act (UMRA) and relationship to this rulemaking
  - Background
  - PCBs in fluorescent light ballasts (FLBs)
  - Potentially affected entities
  - Option selection
  - Preliminary estimate on cost
  - Open table Questions & Answers
  - Next steps

EO 13132: "Federalism" and UMRA Overview

- EO 13132 - requires that Federal agencies consult with elected state and local government officials, or their representative national organizations, when developing regulations that have *Federalism Implications*
- EPA's policy for implementing the EO defines regulations with *Federalism Implications* as those which:
  - (1) preempt state or local law
  - (2)(a) have state and/or local compliance costs of $25 million or more, nationally, in any one year
  - (2)(b) have small government impacts likely to equal or exceed 1% of their annual revenues in any year
- This action may have national intergovernmental compliance costs of $25 million or more in any one year

EO 13132: "Federalism" and UMRA Overview

- UMRA: covers "Federal mandates" that might result in expenditures by State, local, and tribal governments, in the aggregate, or by the private sector, of $154 million (adjusted for inflation) or more *in any one year*
- UMRA analysis includes:
  - State, local, and tribal government proposed cost breakout
  - Evaluation of magnitude of regulatory impact on government entities, considering:
- This action may have total Federal mandate compliance costs of $154 million or more in any one year

Background

- Beginning in 1979, EPA has promulgated regulations (at 40 CFR part 761) that established authorizations for certain ongoing uses of PCBs
- On April 7, 2010, EPA published an *Advanced Notice of Proposed Rulemaking* (ANPRM) entitled "Polychlorinated Biphenyls: Reassessment of Use Authorizations"
- EPA commenced developing a proposed rule to address four categories of authorized uses:
  - PCB small capacitors in fluorescent light ballasts (FLBs)
  - Liquid PCBs in other electrical equipment
  - PCBs in natural gas pipelines
  - PCB contaminated porous surfaces

Activity to Prepare for a NPRM

- On November 21, 2013, EPA engaged stakeholders in EO 13132: Federalism consultation to discuss potential rulemaking
- Since the 2013 consultation, EPA has narrowed the scope of what is being proposed in the rule; specifically, the agency is focusing this rule on the use of PCB-containing small capacitors in FLBs
- EPA has initiated this rulemaking to end certain authorized uses of PCBs
  - This new proposed rule would phase out PCB FLBs in daycares and in primary and secondary schools
  - PCB FLBs in use exceed their design life by decades and are prone to increasing failure
  - EPA believes it is important to move forward with a rule to protect children and adults in schools and daycares from PCB FLB exposures
  - More cost-effective (energy-efficient) alternative FLBs are readily available to replace old PCB FLBs.
- EPA will focus on the other “PCB Use Authorizations” in a second future rulemaking

PCB Health Concerns

- Sudden rupture of PCB small capacitors in FLBs may result in exposure to the occupants and may also result in significant clean-up costs
- Intact PCB FLBs can emit PCBs into indoor air which may present a significant exposure to occupants, particularly children
- Potential acute health effects can include chloracne, irritation of eyes, face and skin
- Potential chronic health effects can include liver disorders, reproductive and developmental effects, cancer, and effects on endocrine, immune and nervous systems

PCBs in FLBs – Identification

FLB Containing Fixture

PCBs in FLBs – Identification

Typical PCB Containing FLB

Marked, Non-PCB FLB

PCBs in FLBs – Identification

PCB FLB Failure

PCBs in FLBs – Failure is a Problem

- PCB FLB failure and release is a nationwide issue
  - Documented failures in New York, North Dakota, Indiana, Ohio, Washington, Michigan, West Virginia, etc.
- Worcester Public Schools, Worcester County, Massachusetts
  - Voluntary planning for removal and remediation
  - 21 of 29 schools identified “stained” FLBs in fixtures
- Los Angeles County Unified School District, Los Angeles, California
  - Voluntary planning for removal and remediation
  - 553 schools inspected; 7,827 PCB FLBs with 2,772 leaking
- Washington State Department of Ecology “PCB Chemical Action Plan”
  - Outlines 9,000 potential school buildings in need of assessment to determine presence of PCB FLBs

Potentially Impacted Entities

- Elementary and secondary schools (NAICS* - 611110)
- Child day care services (NAICS* – 624410)
- Commercial building owners (NAICS* - 53)
- Governments or other entities with public buildings (NAICS* - 92)
- Repair and maintenance of lighting and buildings (NAICS* – 811)

*NAICS – North American Industrial Classification System

NOTE – The NAICS codes are not intended to be exhaustive, but rather provide guidance for attendees likely to be affected by this action

Potentially Impacted Entities

Building Type	Buildings with PCB FLBs as % Total Buildings in 2018 [1]	Number of Buildings that may Have PCB-containing FLBs in 2018 [1]	Number of PCB-containing FLBs in 2018 [2]	Number of Leaking PCB-containing FLBs in 2018 [3]
Local Public Schools	8%	15,241	1,808,988	1,255,919
State Public Schools	8%	218	30,309	21,043
Tribal Public Schools	8%	27	3,176	2,205
Private Schools	12%	3,384	298,168	207,008
Private Daycares	12%	8,306	488,109	338,878
Local Public Daycares	8%	581	73,687	51,159
State Public Daycares	5%	7	1,075	746
Total	**10%**	**27,765**	**2,703,512**	**1,876,957**

[1] Total Buildings and pre-1980 buildings, fluorescent lighting, no complete lighting retrofit based on 2012 Department of Energy survey data, Census data and NCES/NSECE data

[2] Assumes 17% of total FLBs contain PCBs

[3] Assumes 69% leak in 2018

EPA Rulemaking Option Selection

Options Overview

Options Considered		
Option No.	**Option Variation**	**Phase-Out Year**
(1)	With both notification and certification	2020 or 2022
(2)	With notification and without certification	2020 or 2022
(3)	Without notification and with certification	2020 or 2022
(4)	Without both notification and certification	2020 or 2022

- Notification (audience is building occupants, including parents or guardians of children attending the facility)
  - Post placard in prominent place in building and web-based notification on school (or school board) website
- Certification
  - EPA standardized form to be submitted to EPA no later than the phase-out date certifying there are no PCB FLBs present in the school and daycare building(s)

EPA Rulemaking Option Selection

How Rulemaking Could Affect a School or Daycare – Unit Costs

- Notification:
  - $298 for school (based on 1 clerical, 1 manager and 6 maintenance hours)
  - $167 for daycare (based on 0.6 clerical, 0.6 manager, and 3.4 maintenance hours)
- Inspection: $6.14 per fixture (based on 2 janitors x 9 minutes per fixture)
- Replacement:
  - $175.52 for replacement (with parts and labor included),
  - plus $8.73 for disposal (including drums and shipping costs) per fixture with leaking ballast(s)
- Retrofit:
  - $79.69 for retrofit (with parts and labor included)
  - plus $3.37 for disposal (including drums and shipping costs) per fixture without leaking ballast(s)
- Certification form: $18 per school/daycare (based on 15 minutes of education administrator time to fill out form)

EPA Rulemaking Option Selection

How Rulemaking Could Affect a School or Daycare

	Small (Daycare)	Medium (Elementary School)	Large (High School)
Characteristics			
Square Footage	35,000	70,000	125,000
Total FLBs (0.01 per square foot)	350	700	1,250
PCB FLBs (16.67% Total)	58	117	208
Leaking PCB FLBs in 2020 (72.7% PCB FLBs)	42	85	151
Up-Front Costs in 2018			
Occupant Notification ($167-$298 per building)	$167	$298	$298
Total	$167	$298	$298
Up-Front Costs in 2020			
Inspection ($6.14 per FLB)	$2,149	$4,299	$7,676
Replace Leaking ($184.25 per leaking PCB FLB)	$7,738	$15,661	$27,822
Retrofit Non-Leaking ($83.06 per non-leaking PCB FLB)	$1,329	$2,658	$4,735
Certification Form ($18 per building)	$18	$18	$18
Total	$11,234	$22,636	$40,251

EPA Rulemaking Option Selection

UMRA Highest Expenditures[1] by Sector/Ownership

Summary of Highest Expenditures (Undiscounted)		
	2020	**2022**
Government Sector (millions)		
Local Government	$182.7-183.0	$106.5-106.8
State Government	$3.0-3.1	$1.8
Tribal Government	$0.3	$0.2
Government & Private Ownership (millions)		
Intergovernmental subtotal	$186.1-186.4	$108.5-108.8
Private subtotal	$76.3-76.5	$44.5-44.7
Total Highest Expenditures (millions)		
All sectors grand total:	$262.4-262.9	$153.0-153.4

[1] Highest expenditures in any one year during the rule periods (2018 to 2020; 2018 to 2022); the $ ranges represent expenditures across all 4 options.

EPA Rulemaking Option Selection

Example of Effect of Phase-Out Date on Costs

	2020 Phase Out	2022 Phase Out
Years from Final Rule to Phase-Out	2 Years	4 Years
Pre-1980 Buildings (all types) w/o Lighting Upgrade	17,810	10,646
• PCB FLBs Remaining	1,734,170	1,036,577
• Leaking PCB FLBs Remaining	1,261,766	770,829
• PCB FLB Leaks Prevented by Rule	34,479	9,150
Rule Cost *(includes notification, certification, PCB FLB replacement)* (7% Discount Rate)	$90.4 million	$49.0 million
Rule Cost Savings[1] (7% Discount Rate)	-$73.8 million	-$33.6 million
Bottom Line Net Rule Cost (7% Discount Rate)	$16.6 million	$15.4 million

[1] Cost Savings = energy savings from improved lighting efficiency & other cost savings such as leak clean up costs avoided due to early PCB FLB replacement and covers all schools and daycares

EPA Rulemaking Option Selection

Bottom Line Economic Cost of Each Option

Summary of [1] Bottom Line Costs by Option (7% Discount Rate)		
Options	**2020 Phase-Out**	**2022 Phase-Out**
(1) With both notification and certification	$16.6 million	$15.4 million
(2) With notification and without certification	$16.2 million	$15.0 million
(3) Without notification and with certification	$8.7 million	$7.5 million
(4) Without both notification and certification	$8.3 million	$7.1 million

[1] Bottom Line Costs cover all schools and daycares = (costs - cost savings)

Open Table Questions & Answers

- Do you have information regarding the degree to which school building(s) or daycares in the United States (built before 1979) have FLBs that contain PCBs?
- Do you have information regarding the degree to which school building(s) or daycares in the United States (built before 1979) have performed lighting efficiency upgrades?
- Do you have information pertaining to either the process or the length of time it takes for local education agencies (e.g., school districts) or owners of daycare buildings to inspect, fund, plan and complete retrofits?
- Other questions/comments?

Next Steps

- Written comments will be due to EPA 60 days from today, on September 28, 2016
- Submit comments by email to Peter Gimlin (gimlin.peter@epa.gov) and CC Andrew Hanson (hanson.andrew@epa.gov)
- Anticipated date for NPRM promulgation: Early 2017

EPA Contact

Thank you!

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