

# STATUS OF EPA PROPOSAL TO ADOPT METHOD 1668 FOR PCB ANALYSIS IN AMBIENT WATERS

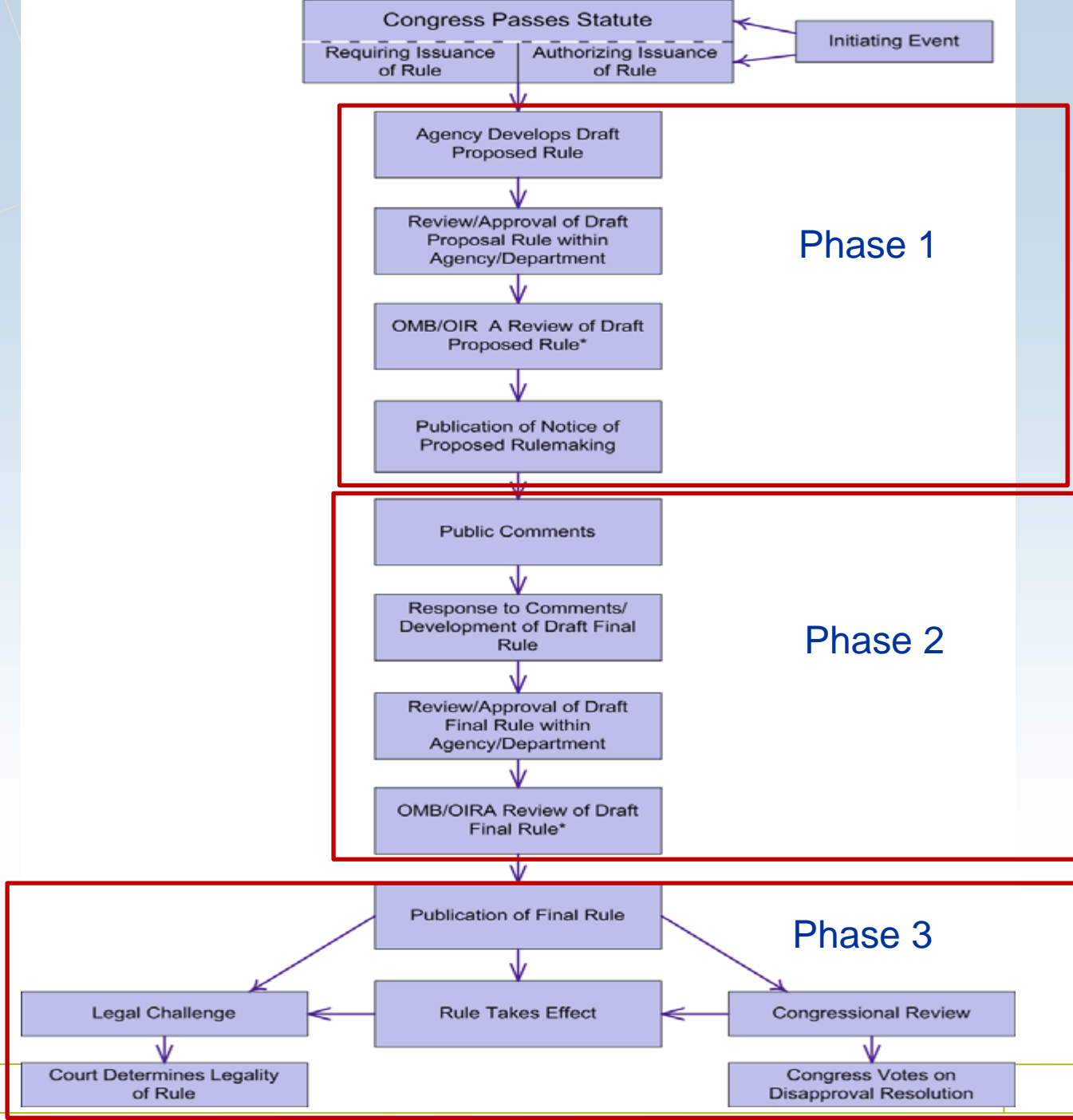
Kelly Collins  
Principal  
CDM

November 9, 2011

**CDM**

# Overview

- EPA's Regulations Process
- PCB Analysis by Method 1668
- Rulemaking Progress-to-Date



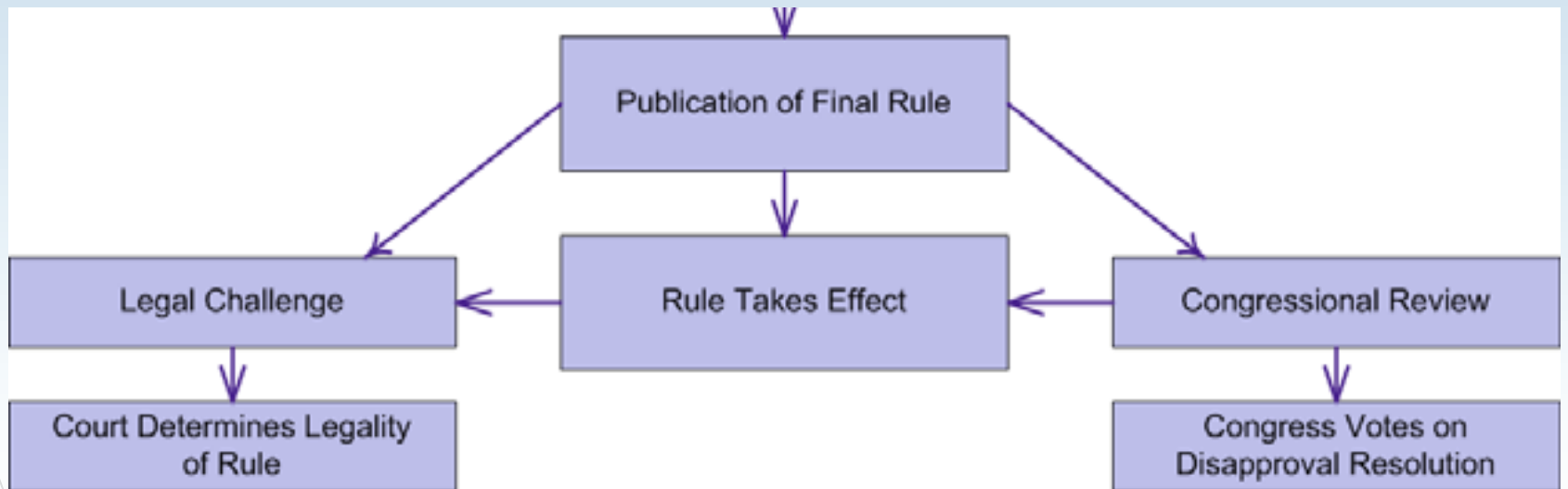
# Phase 1 Rulemaking Process



# Phase 2



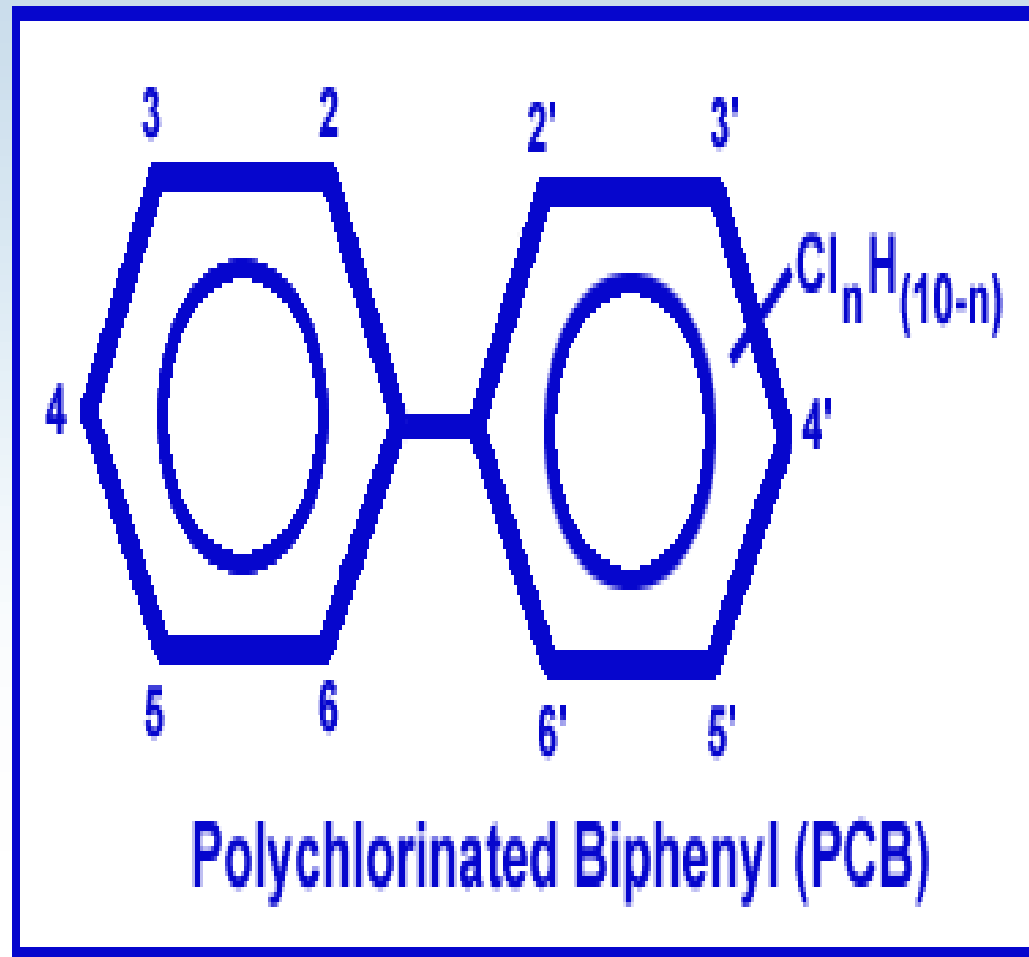
# Phase 3



# PCB Congeners

## PCB Congeners-

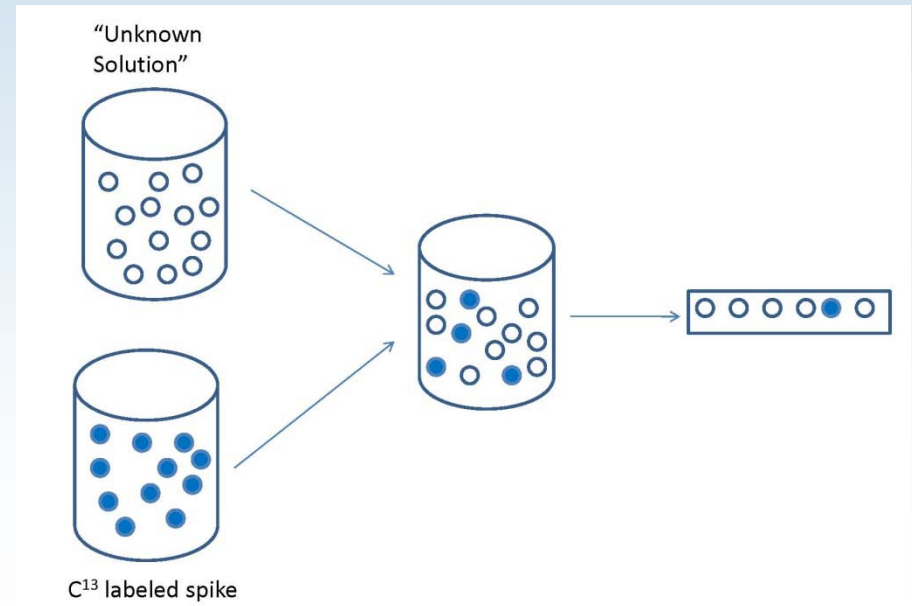
- A set of compounds with similar composition and structure
- Each PCB molecule contains 1 to 10 chlorine atoms attached to a biphenyl structure, allowing for 209 possible arrangements.



# PCB Analysis by Method 1668

## Method 1668 –

- determines PCB congeners in environmental samples
- isotope dilution
- high resolution gas chromatography/high resolution mass spectrometry



# Chlorinated Biphenyl Congeners in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS,

## Method 1668A (1999)

- Developed by Offices of Science and Technology in late 1990s
- Expanded to cover all PCB congeners in 1999

## Method 1668B (2008)

- Replaced single-lab quality control (QC) acceptance criteria with interlaboratory criteria
- Interlaboratory validation study: “Method1668A Interlaboratory Validation Study Report (EPA-821-08-021)” and peer review of that study

# Method 1668C

## **Chlorinated Biphenyl Congeners in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS April 2010 (EPA-820-R-10-005)**

- Allows the upper recovery limit for some congeners to be >100 percent
- Established MDLs and MLs
- Describes how to lower MDLs and MLs
- Calibration verification with a single solution

# Federal Register: September 23, 2010 (Volume 75, Number 184)]

- Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act; Analysis and Sampling Procedures: Proposed rule; Comments on this proposal on or before November 22, 2010
- Changes to analysis and sampling test procedures in wastewater regulations:
  - EPA Method 1664 HEM; Oil and Grease
  - EPA Method 200.5 Axially Viewed Inductively Coupled Plasma—Atomic Emission Spectrometry
  - Method 632, “The Determination of Carbamate and Urea Pesticides
  - Method 1614A, “Brominated Diphenyl Ethers by HRGC/HRMS
  - Method 1668C PCB by HRGC/HRMS
  - Etc.

# Public Comments

- 119 comments on the proposed rule
- ~20 of the comments addressed Method 1668
  - 3 comments were in favor of adopting Methods 1668C
  - 3 comments requested additional time because of the complexity of the method and the amount of information
  - ~ 14 comments cited quality control concerns and urged that Method 1668C not be promulgated

# Comments in Favor of Method 1668C

- TestAmerica Inc.

*“We welcome the addition of method 1668C. TestAmerica Inc. has performed this method routinely at multiple locations for several years and it is a valuable option when very low detection limits, specific congener analysis, and/or definitive qualitative identification is required.”*

- Division of Laboratories, Illinois EPA

*“Welcome the addition of method 1668C. It is a valuable option when very low detection limits, specific congener analysis, and/or definitive qualitative identification is required.”*

- New Mexico Environment Department

*“.....NMED’s strong support for EPA to add in Table IC (of 40 CFR 136) EPA Method 1668C....”*

# Comments Against Adopting Method 1668C

- Interlaboratory validation study does not support validation of the method for wastewater, biosolids or tissue.
- Produces inaccurate or problematic data - total calculations and background
- Performance criteria for total PCBs are not defined in Method 1668C
- High analytical costs
- Inappropriate to use for regulatory compliance monitoring
- Lack of strategy for addressing ubiquitous pollutants

# Federal Register: November 18, 2010 (Volume 75, Number 222)

- Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act; Analysis and Sampling Procedures; Extension of Comment Period
- ACTION: Proposed rule; **extension of the public comment period.**
- Comments must be received on or before December 22, 2010.

# Regulatory Status

- EPA has withdrawn Method 1668 C from ‘Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act; Analysis and Sampling Procedures’
- Other analytical issues in the proposed rule are expected to be finalized this year
- Method 1668 will take “longer”

