BOSC Executive Committee PFAS Meeting

Charge Questions and Agenda

Introduction

The mission of the U.S. EPA's Office of Research and Development (ORD) is to provide the best available science and technology to inform and support public health and environmental decision-making at federal, state, tribal, and local levels. This leading-edge research addresses critical environmental challenges and anticipates future science needs.

The September 29-30, 2021, meeting of the BOSC Executive Committee will include a review of ORD's implementation of PFAS research and development. ORD is currently implementing a broad PFAS research and development program that spans ORD's national research programs. The program includes research to:

- Develop methods and approaches for measuring PFAS,
- Better understand risks to human health and the environment from PFAS, and
- Identify and evaluate approaches for addressing PFAS in the environment.

The purpose of this review is to receive the Executive Committee's feedback on the charge questions below.

Question 1 – "Total PFAS" Methods

Many stakeholders have identified a need for validated "total PFAS" methods, such as total organic fluorine (TOF) or total oxidizable precursor (TOP) methods, to quantitatively measure a non-specific amount of PFAS in environmental samples. EPA has expanded the scientific foundation for identifying and quantifying PFAS in the environment through the development of validated analytical methods for specific PFAS and the use of non-targeted analysis methods. ORD researchers are working to develop validated TOF methods for wastewater and air emissions.

Please comment on the implementation of ORD's PFAS methods research. In addition, what suggestions and recommendations can the Executive Committee offer on the utility of "total PFAS" methods and other analytical approaches for identifying "total PFAS" in environmental samples?

Question 2 – Human Health Effects

Due to the large number of PFAS in commerce and the environment, there is an emerging consensus on the need to use grouping- or category-based approaches to assess and address potential PFAS toxicity. While structure-based categories are most common, there is no clear consensus method for categorizing PFAS, and ORD researchers are evaluating other features (e.g., chemical and physical properties, toxicokinetic properties, toxicity mechanisms) for use in categorizing PFAS for human health risk assessment and risk mitigation purposes.

Please comment on the implementation of ORD's research on the human health effects from PFAS. In addition, what suggestions and recommendations can the Executive Committee offer on common category characteristics that would maximize the utility of the resulting PFAS groupings for the broadest set of decision contexts?

Question 3 – Treatment Field Studies

Data on the efficacy and costs of different approaches for removing PFAS from the environment and managing PFAS and PFAS-containing materials are needed to inform federal, state, tribal, and local decisions on drinking water and wastewater treatment, contaminated site clean-up and remediation, and end-of-life materials management. ORD is working to increase our understanding of approaches for addressing PFAS in the environment through analytical method development, laboratory-based studies, pilot-scale studies, and field studies.

Please comment on the implementation of ORD's PFAS treatment research. In addition, what suggestions and recommendations can the Executive Committee offer for working and communicating with communities in potential field study locations?

BOSC Executive Committee PFAS Meeting

Day 1 – September 29

Time (EDT)	Topic	Speakers
11:30 – 12:00	Sign-on and Technology Check	
12:00 – 12:15	Welcome, Opening Remarks and Member Introductions	Tom Tracy (DFO), Lucinda Johnson (BOSC EC Vice Chair)
12:15 – 12:30	ORD Welcome	Chris Frey
12:30 – 12:45	Overview of Charge Questions and Meeting Format	Susan Burden
	PFAS Overview	
12:45 – 1:00	An Introduction to PFAS	Tim Watkins
1:00 – 1:15	ORD's PFAS Research and Development Portfolio	Susan Burden
	Charge Question 1 – Total PFAS Methods	
1:15 – 1:30	Analytical Methods Overview	Chris Impellitteri
1:30 – 1:45	"Total PFAS" Methods	Alice Gilliland
1:45 – 2:45	**Charge Question 1 – Breakout Rooms**	
	Breakout Room 1 – Water Methods	
	Analytical methods for PFAS measurement in environmental samples (aqueous)	Jim Voit
	Analytical method for PFAS in environmental media: CWA-1633	Marc Mills
	Non-targeted analysis of water	James McCord
	Development of adsorbable organic fluorine screening method with detection by combustion ion chromatography	Jody Shoemaker
	Breakout Room 2 – Air Methods	
	Other Test Method 45 (OTM-45)	Lara Phelps
	Additional source air methods under development	Lara Phelps
	Wet deposition of PFAS	John Offenberg
	Total organic fluorine analysis for PFAS in air	Hannah Liberatore
2:45 – 2:55	BREAK	
2:55 – 3:15	**Clarifying Questions on Charge Question 1 Content**	**Lucinda Johnson**
	Charge Question 2 – Human Health Effects	
3:15 – 3:30	Overview: Human Health Effects Research	Annette Guiseppi-Elie
3:30 – 3:45	ORD's Tiered Toxicity Testing Strategy for PFAS	Rusty Thomas

3:45 – 4:40 **Charge Question 2 – Breakout Rooms**

Breakout Room 1 – Toxicity Testing

New approach methods – toxicity ..... Richard Judson
New approach methods – toxicokinetics ..... Barbara Wetmore
In vivo toxicity testing ..... Justin Conley
PFAS and multimorbidity: Using electronic health records to probe systemic effects ..... Cavin Ward-Caviness

Breakout Room 2 – Assessments

Human health toxicity assessment for PFBS ..... Beth Owens
Draft IRIS assessments for PFBA, PFHxA, PFDA, PFHxS, PFNA, and their related salts ..... Andrew Kraft
Systematic evidence maps to characterize available evidence for 9000 PFAS ..... Kris Thayer

4:40 – 5:00 **Clarifying Questions on Charge Question 2 Content ..... Lucinda Johnson**

5:00 – 6:00 BOSC Executive Committee Deliberations ..... Lucinda Johnson

6:00 Adjourn

BOSC Executive Committee PFAS Meeting

Day 2 – September 30

Time (EDT)	Topic	Speakers
11:30 – 12:00	Sign-on and Technology Check	
12:00 – 12:15	Welcome Back	Tom Tracy (DFO), Lucinda Johnson (BOSC EC Vice Chair)
	Charge Question 3 – Treatment Field Studies	
12:15 – 12:30	Overview: PFAS Treatment and Destruction Research	Greg Sayles
12:30 – 12:45	EPA PFAS Innovative Treatment Team Findings on PFAS Destruction Technologies	Tim Watkins
12:45 – 1:45	**Charge Question 3 – Breakout Rooms**	
	Breakout Room 1 – Bench- and Pilot-Scale Studies	
	Drinking water treatment	Tom Speth
	Thermal treatment of PFAS	Bill Linak
	Non-combustion technologies for PFAS destruction	Max Krause
	Mechanochemical destruction of PFAS	Erin Shields
	Breakout Room 2 – Field Studies	
	Waste management	Thabet Tolaymat
	Land application of biosolids	Kirk Scheckel
	Field-scale thermal treatment	Phillip Potter
	Source characterization	Marc Mills
1:45 – 2:05	**Clarifying Questions on Charge Question 3 Content**	**Lucinda Johnson**
2:05 – 2:20	**ORD Wrap-up Presentation**	**Susan Burden**
2:20 – 2:30	BREAK	
2:30 – 3:00	Public Comment	Tom Tracy
3:00 – 5:00	BOSC Executive Committee Deliberations	Lucinda Johnson
5:00	Adjourn	