



# Waste Management

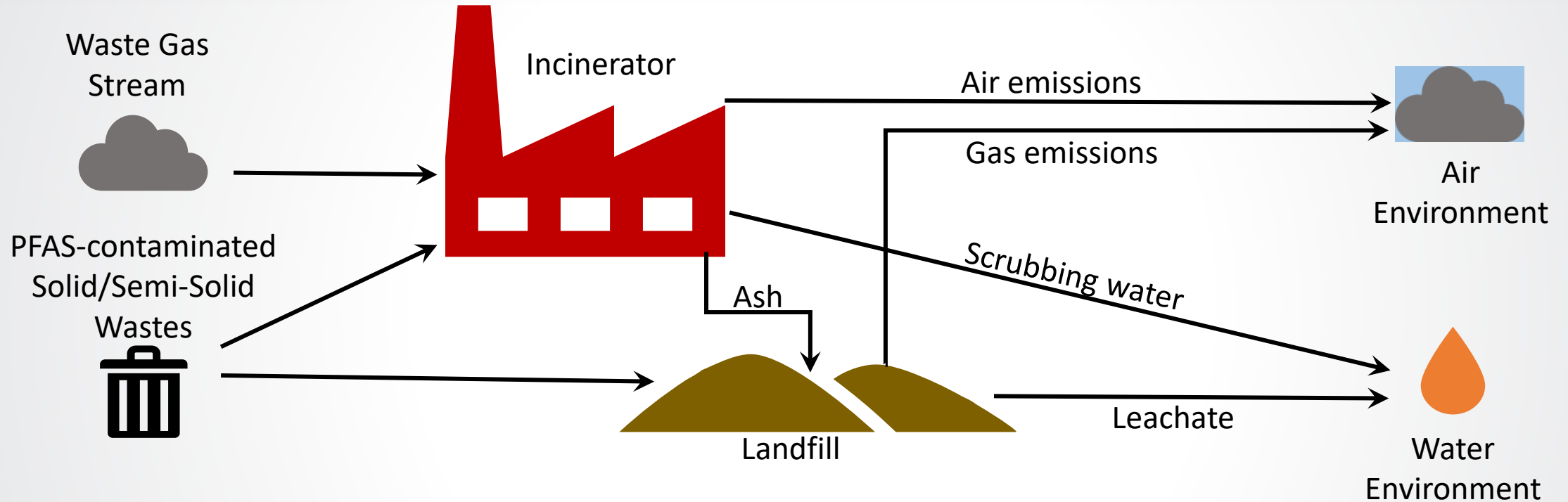
**Thabet Tolaymat**

Center for Environmental Solutions and Emergency Response  
Office of Research and Development

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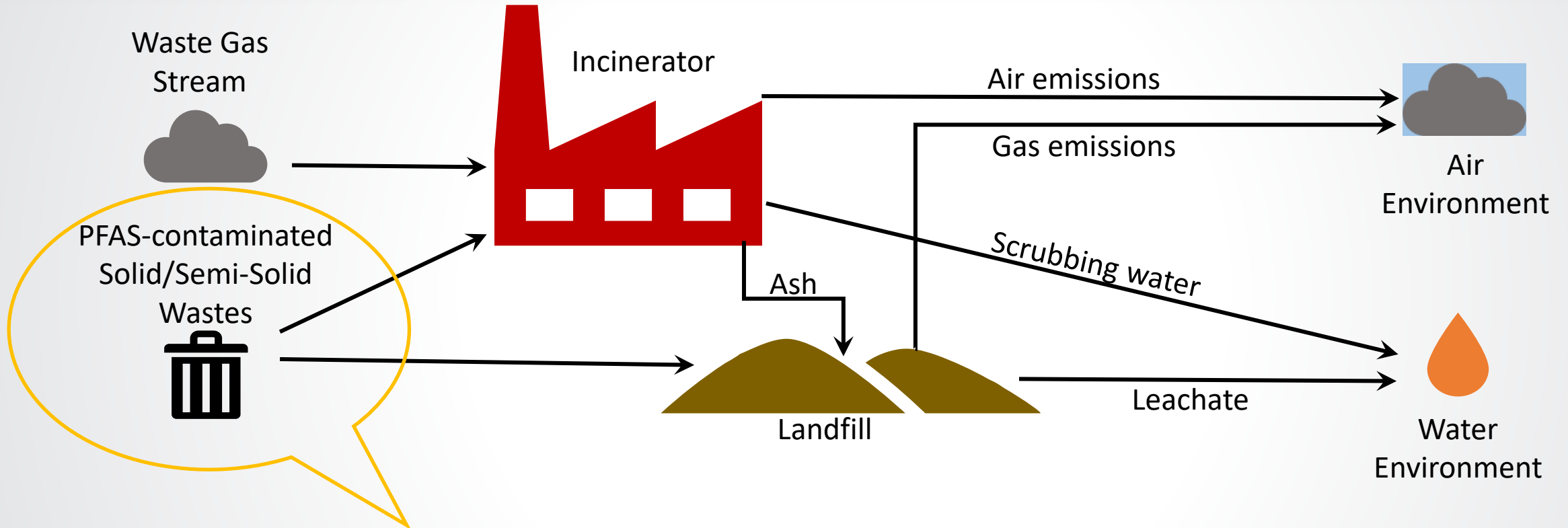
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# Waste Management Goal

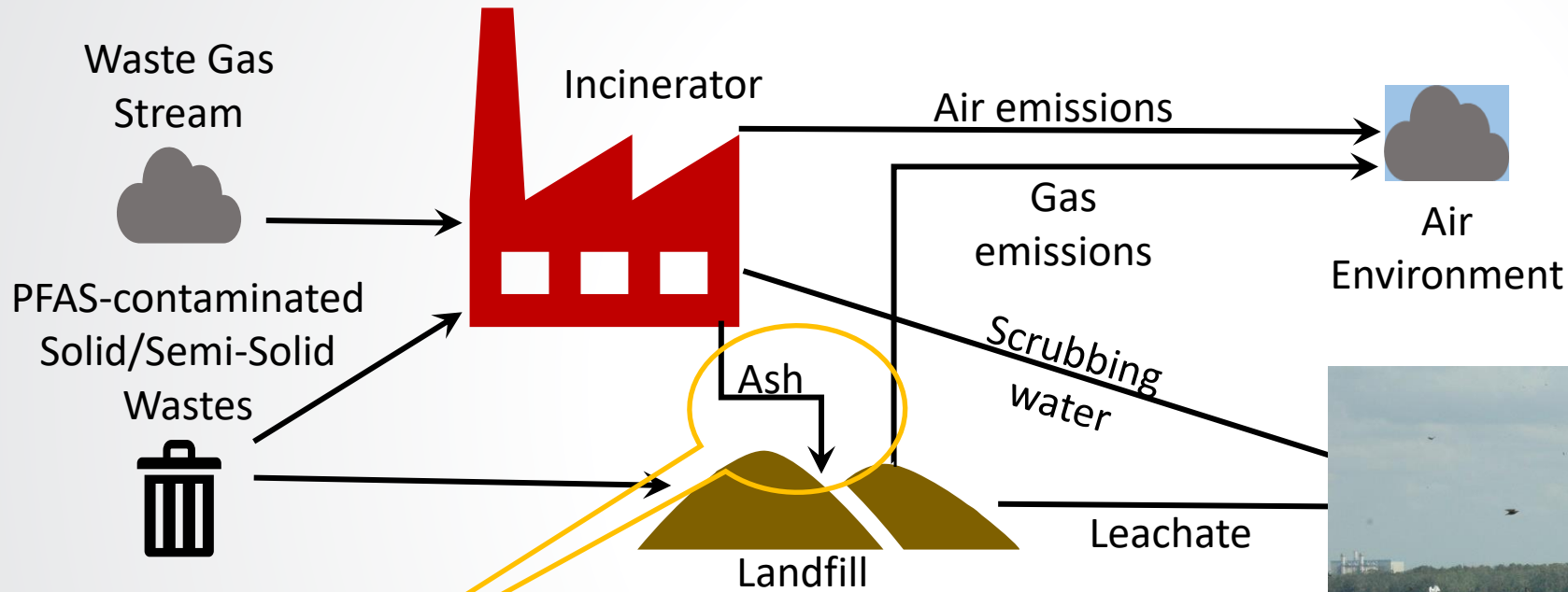


## PFAS Waste Destruction and Disposal

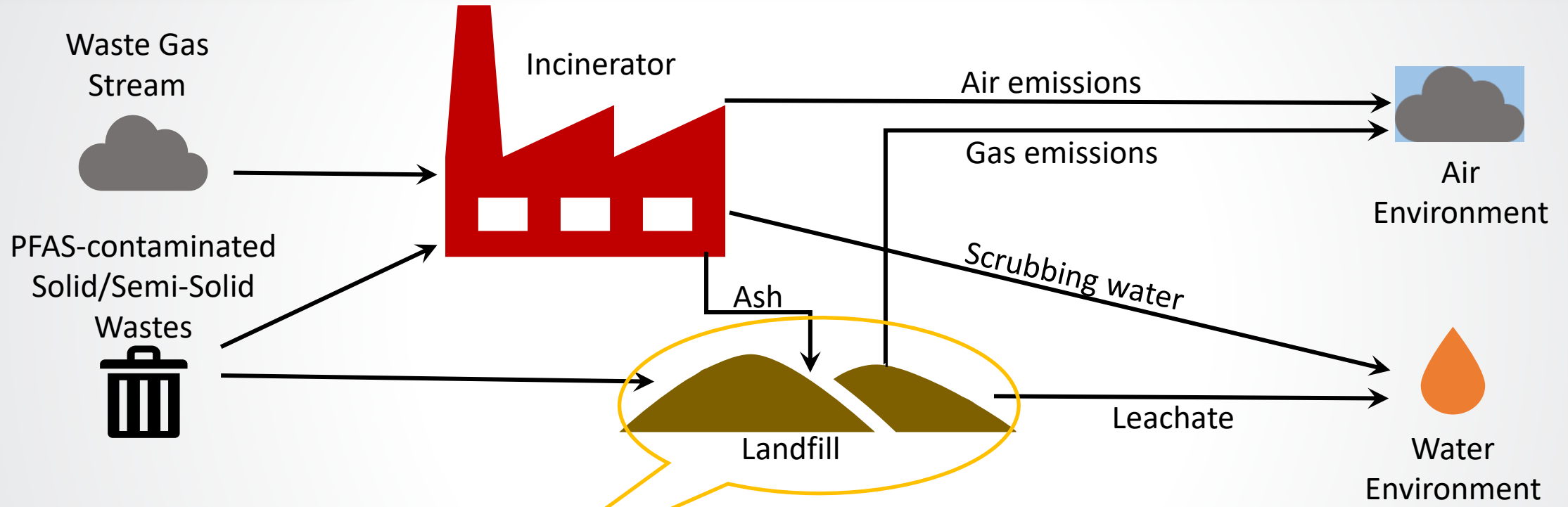
There is a data gap regarding how the end-of-life management and ultimate disposal of PFAS-containing materials can impact PFAS concentrations in the environment. PFAS present in materials often end up in a recycling facility, landfill or incinerator. Our goal is to evaluate PFAS emissions from solid waste management system.



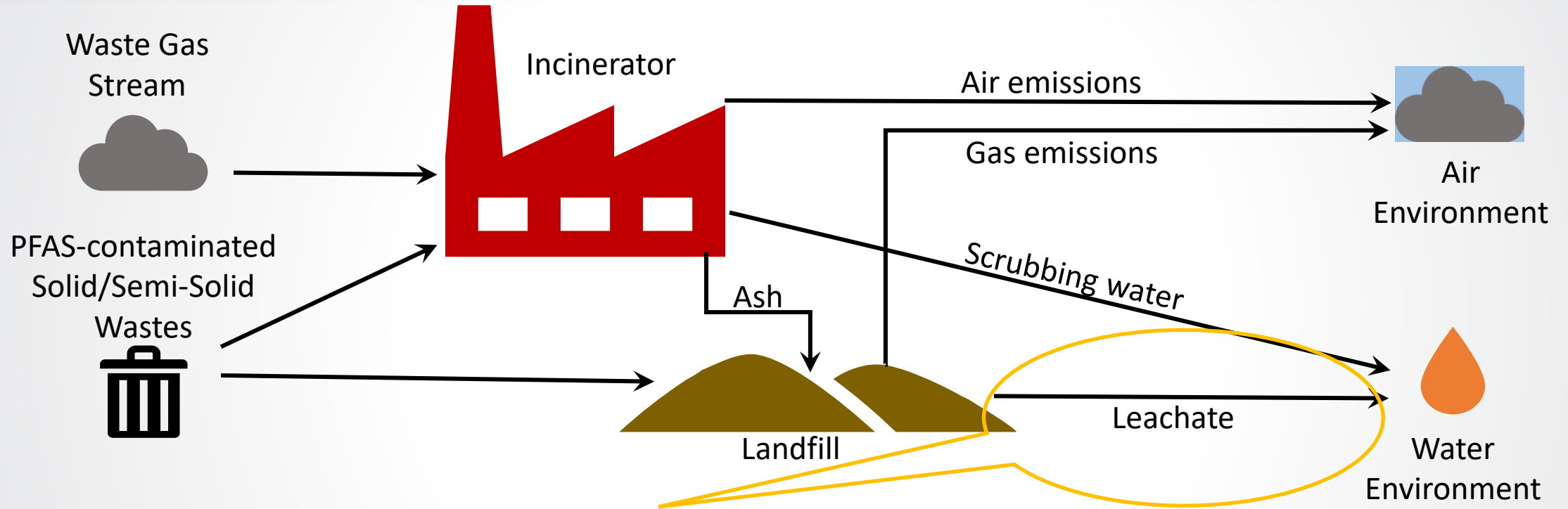
- PFAS in fresh waste vs. landfilled waste
- Evaluating PFAS waste solidification techniques for PFAS immobilization
- Mobility of PFAS from waste utilizing the Leaching Environmental Assessment Framework (LEAF)



- Quantify PFAS content of MSW incinerator ash
- Evaluate the mobility of PFAS from incinerator ash



- Demonstrate PFAS transformation is conducive in landfill environment (i.e., decomposition, elevated temperatures, low oxygen, and prolonged contact time)
- Examining the transport of PFAS compound through landfill liners
- PFAS leaking through primary liner system



- Quantifying PFAS in landfill leachate
  - Municipal solid waste landfills, construction and demolition landfills, ash monofils, and hazardous waste landfills
- Evaluating the effectiveness of conventional leachate treatment for the removal of PFAS
- PFAS emissions during landfill leachate treatment (e.g., volatilization, constructed wetlands)



# Collaborations

## Lead EPA ORD Researchers

- Max Krause
- Matthew Magnuson
- Marc Mills
- Thomas Speth

## Select EPA Regional and Program Collaborators

- Michael Galbraith (OLEM)
- Norman Birchfield (OLEM)
- Susan Mooney (EPA R5)
- Eric Christianson (EPA R6)

## Select Outside Collaborators

- Timothy Townsend (university of Florida)
- Helena Solo-Gabriele (university of Miami)
- Jonathan Bowden (University of Florida)
- Nicole Robei (University of Florida)
- John Scheret (Florida Center for Solid and Hazardous Waste management)

## Select State and Industry Collaborators

- Florida Department of Environmental Protection
- Florida Center for Solid and Hazardous Waste Management
- US. Ecology Inc.

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