

Land Protection Updates



Kelly Dixon
Director Land Protection Division



OKLAHOMA
Environmental
Quality

Staff Changes



- Heather Mallory
Agency QA Officer



- David Cates
Special Projects
Manager



- Kole Kennedy – Used Tire Manager



- Amy Brittain
Manager VCP & Risk



Staff Changes



- Jon Reid
VCP & Chemical Reporting
Manager



- Kelsey Buford
Superfund Manager



Vacancies & Staff Turnover

PFAS Sampling Guidance and SOPs



What are PFAS?

PFAS = Per- and polyfluoroalkyl substances

- Have been manufactured and used in products since the 1940s
- They are chemically stable, water resistant, and heat resistant
- They tend to bioaccumulate and have the potential to adversely impact human health

PFAS Guidance



- PFAS Guidance and SOPs were developed by Dr. Ken Ede's graduate students in the Professional Science Master's Program at OSU
- The PFAS Guidance and Standard Operating Procedures are available on DEQ's website:
<https://www.deq.ok.gov/land-protection-division/quality-assurance/>

Challenges in Sampling PFAS



- There are many cross-contamination sources that can be encountered during sampling
- PFAS is found in clothing, personal care products, makeup, sunscreen, sampling equipment, etc.



PFAS Sampling Guidance



- PFAS Sampling Guidance
 - Companion document to the PFAS Standard Operating Procedures (SOPs)
 - Details dos and don'ts for:
 - ✦ Clothing, personal care products, PPE, sampling equipment, sampling containers, field materials, and decontamination procedures
 - Provides guidance on sample collection, shipment, and quality assurance
- PFAS SOPs for the following sample media:
 - Air, drinking water, fish tissue, groundwater, soil and sediment, and surface water

Example of PFAS Sampling Guidance

Dos and Don'ts



Table 1: Clothing¹

Allowed	Not Allowed	Needs Additional Research
<ul style="list-style-type: none"> • Well laundered clothing (recommended six times prior to sampling) • 100% cotton (preferred) • Synthetic fabrics • Polyvinyl Chloride (PVC) • Polyurethane • Uncoated Tyvek® clothing • Wax-coated fabrics. • Rubber/Neoprene 	<ul style="list-style-type: none"> • New/unwashed clothing • Clothing applied/washed with fabric softeners, fabric protectors including ultraviolet (UV) protection, water, dirt or stain-resistant chemicals, or insect-resistant chemicals • Clothing containing Tyvek® • Flame resistant (FR) clothing • Clothing made of Gore-Tex or other known PFAS containing materials. 	<ul style="list-style-type: none"> • Tyvek® suits, clothing that contains Tyvek®, or coated Tyvek®

¹Clothing should be kept dust and fiber free.

Table 2: Boots

Allowed	Not Allowed	Needs Additional Research
<ul style="list-style-type: none"> • Polyurethane boots • PVC boots • PFAS-free boot covers 	<ul style="list-style-type: none"> • Gore-Tex® boots • Boots made from water-resistant synthetics 	

PFAS Regulation



CERCLA Hazardous Substance

- Generator would retain liability
- Opportunity for cleanup
- Potential to pull in landfills, POTWs and others as responsible parties

RCRA Hazardous Waste

- Corrective action required for release at a RCRA facility
- Potential to increase routine disposal costs to a point of disruption



EPA PFAS Regional Screening Levels

CERCLA/DOD

Risk-based approach

Regional Screen Levels

May '22 PFOA PFNA
PFOS FPHxS
HFPO-DA (genX)

'14, '21 PFBS

- Tap water
- Surface Soil
- Protection of ground water

- Regional Screening Levels

<https://www.epa.gov/risk/regional-screening-levels-rsls>

- Regional Removal Management Levels:

<https://www.epa.gov/risk/regional-removal-management-levels-chemicals-rmls>

Path Forward



- Regulate PFAS compounds in phases based on sound science as we learn more about:
 - toxicity
 - prevalence
 - disposal and destruction technology
- Consider AFFF take-back program
- Use TSCA to limit use in products
- Include exemption for POTWs and possibly other “passive receivers” of PFAS waste

Did You Know Campaign



- Employee Engagement
- Telling our story
- <https://youtu.be/c3ba0cpTfuA>
- <https://youtu.be/uDQKGTW5vbo>
- <https://youtu.be/LhLinlWkRJ8>
- Shout out to: Rachel Miller, and LPD video Team
Erin Hatfield and Tabby King