

Prescribed Burn at Rocky Flats National Wildlife Refuge - CDPHE Roles

*Rocky Flats Stewardship Council Meeting
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CDPHE Roles:

- Confirm protectiveness of remedy
- Provide information
 - contaminant levels in soil
 - exposure pathways
 - previous burns
- Review/approve smoke management permit (APCD)

Protectiveness of Remedy

- Notice of Intent: “...no hazardous substances, pollutants, or contaminants occur in the Peripheral OU above levels that allow for unlimited use and unrestricted exposure.”
- CAD/ROD: Emissions from a fire, even a scenario involving a fire in the 903 Pad area, will be much lower than those requiring further action.

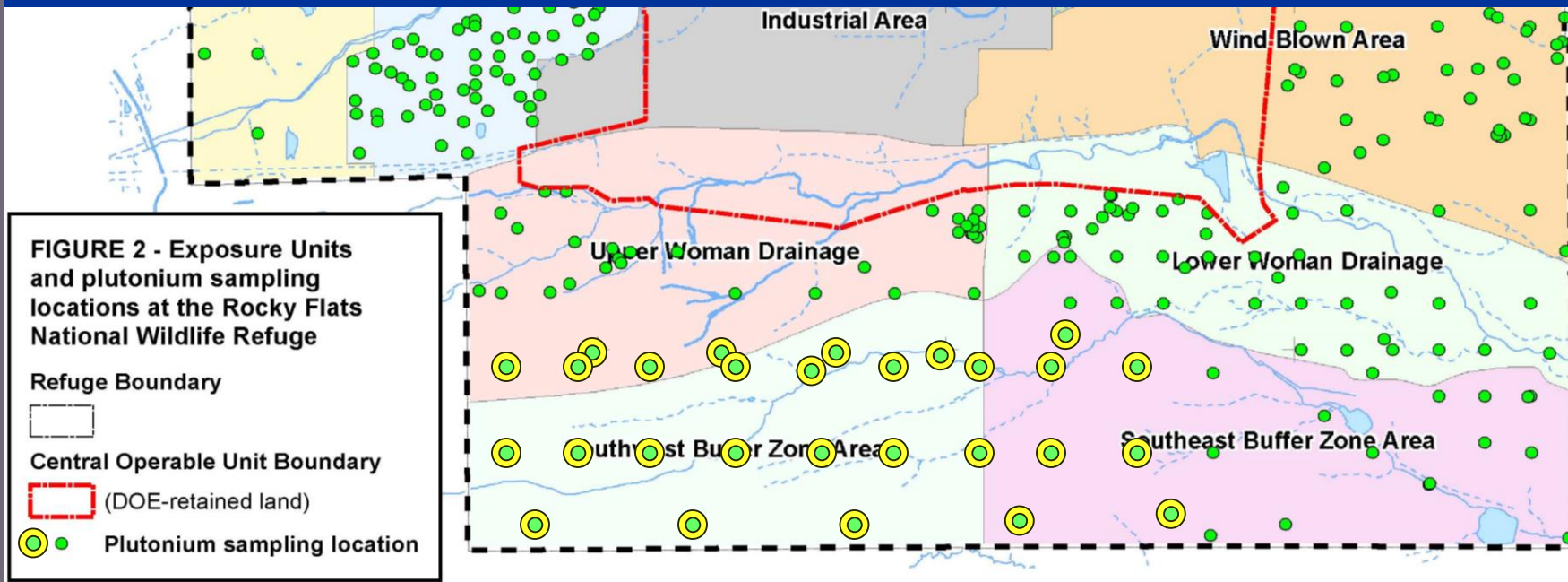
Contaminant Levels in Soil

38 = Number of Samples

28 = Number of Sample Locations 

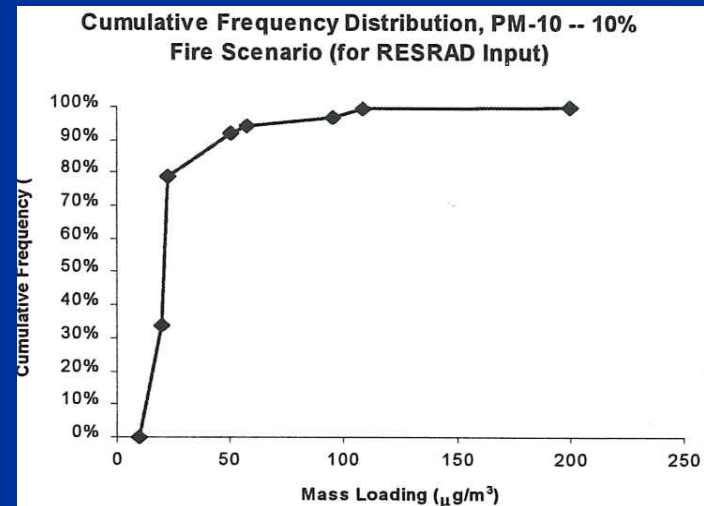
0.230 pCi/g = Average of Representative Values

0.068 pCi/g = Average of Representative Values (w/o #1-144)



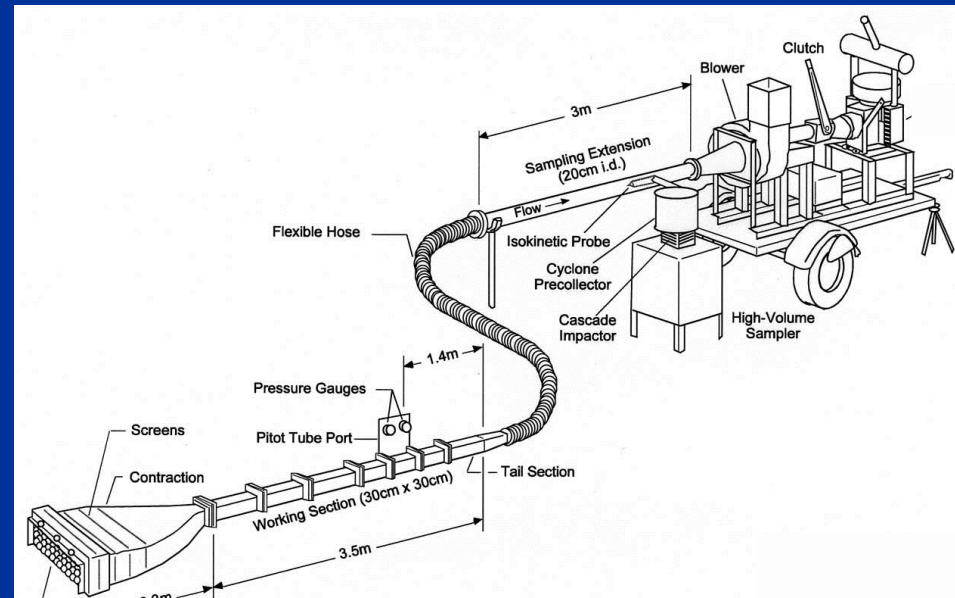
Affect on Exposure Pathways

- Direct contact with soil
- Vegetation uptake
- Erodability \Rightarrow surface water
- Mass loading
 - Wind erosion potential may initially increase up to 9 times due to fire
 - Spring fire multiplier = 2.5
 - Fall fire multiplier = 4.7



Previous Burns

- Uncontrolled wildfires
 - Radioactivity of resuspendable fraction = bulk soil activity
- Prescribed burn (2000)
 - Monitoring data:
 - air samplers (< detection)
 - wind tunnel studies
 - Modeling (RESRAD)
 - annual mass loading multipliers



Smoke Management Permit (APCD)

- ~400 permits issued each year
- Considerations:
 - Air quality parameters (particulates, ozone)
 - Air pollution alerts
 - Potential smoke receptors; smoke sensitive areas
 - Non-burning fuel treatments
 - Emission reduction techniques
 - Weather conditions (wind direction, wind speed, moisture, etc)
- Smoke contingency plan