WELCOME TO LET'S TALK ABOUT HANFORD

WE WILL BEGIN TONIGHT'S CONVERSATION SOON

DEPARTMENT OF ECOLOGY
State of Washington

LET'S TALK ABOUT HANFORD

Environmental Public Health
Office of Radiation Protection

RADIOACTIVE AIR EMISSIONS SECTION

What we do:

- Enforce the State and Federal Ambient Air Standard for Radionuclides through licensing and inspection activities

Authority

- Nuclear Energy and Radiation Chapter 70A.233 RCW
- Washington State Clean Air Act Chapter 70A.15.3130 RCW
- National Emission Standards for Emissions of Radionuclides Other Than Radon From Department of Energy Facilities, 40 CFR 61 Subpart H. Full Delegation from EPA granted January 4th, 2023

LICENSING

- Issue Radioactive Air Emission License (FF-01)
- Currently covers approximately 522 emission units (point source and fugitive)
- License identifies emission limits, in addition to emission control, monitoring, and reporting requirements
- Review CERCLA Documentation to ensure meeting substantive standards

Emission Unit ID: 856

200E P-296A047-001

296-A-47

This is a MAJOR, ACTIVELY ventilated emission unit.

241-AW TANK FARM

Emission Unit Information

Stack Height: 60.00 ft. 18.29 m. Stack Diameter: 0.85 ft. 0.26 m.

Average Stack Effluent Temperature: 94 degrees Fahrenheit. 34 degrees Celsius.

Average Stack ExhaustVelocity: 36.50 ft/second. 11.13 m/second.

Abatement Technology BARCT WAC 246-247-040(3), 040(4)

state only enforceable: WAC 246-247-010(4), 040(5), 060(5)

Zone or Area	Abatement Technology	Required # of Units	Additional Description
	Deentrainer	1	Operational at all times, when the exhauster is in use.
	Heater	1	Operational at all times, when the exhauster is in use.
	High Efficiency Particulate Air (HEPA) Filter	2	2 HEPA filter stages in series
	Fan	1	

Monitoring Requirements

state enforceable: WAC 246-247-040(5), 060(5), and federally enforceable: 40 CFR 61 subpart H

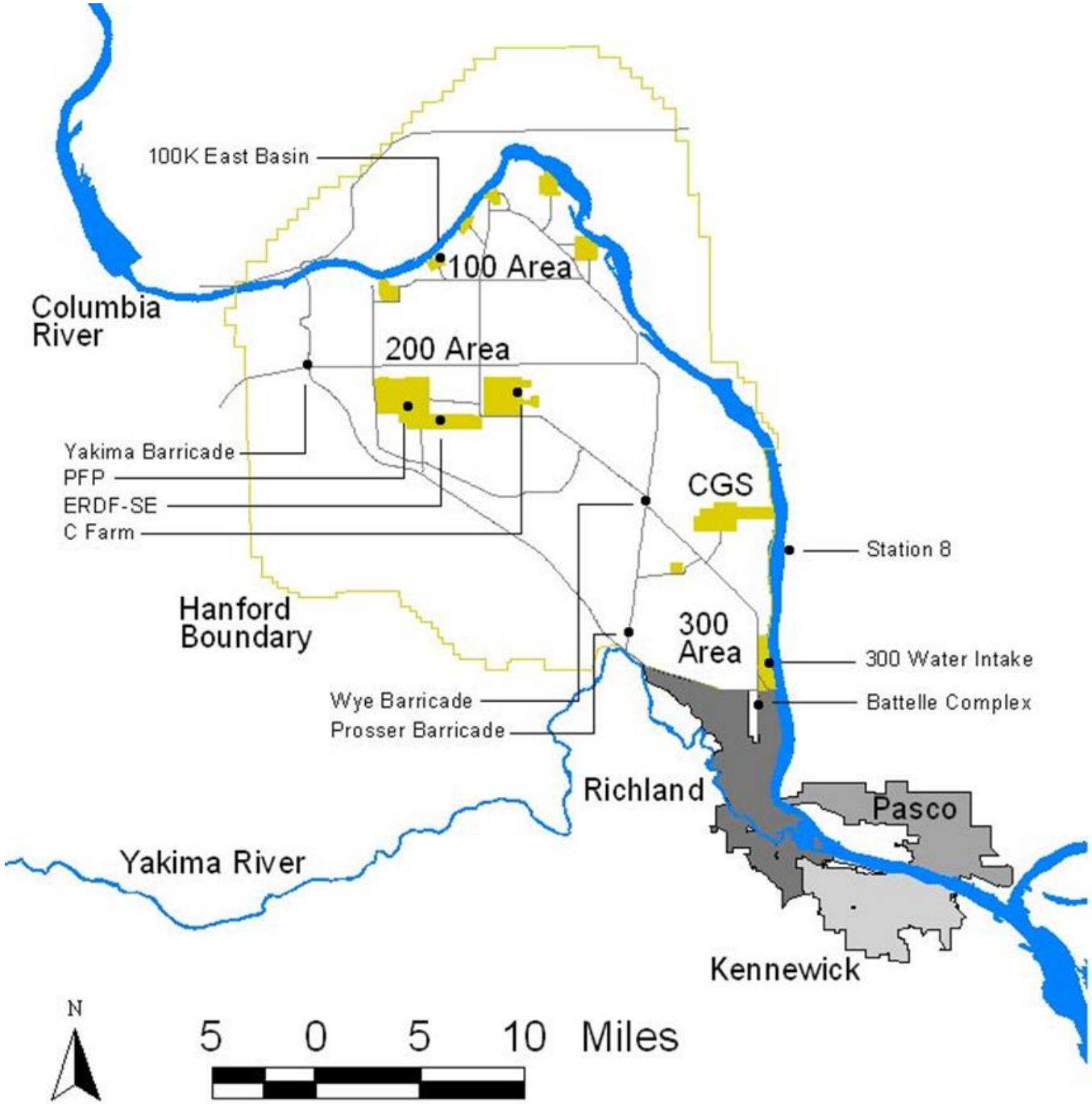
Federal and State Regulatory	Monitoring and Testing Requirements	Radionuclides Requiring Measurement	Sampling Frequency
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(2)	40 CFR 61, Appendix B Method 114	Sr-90, Y-90, Cs-137, Eu-154, Pu-238, Pu-239, Pu-240, Am-241, Pu-241	Continuous during operation

Sampling Requirements Record Sample

INSPECTIONS

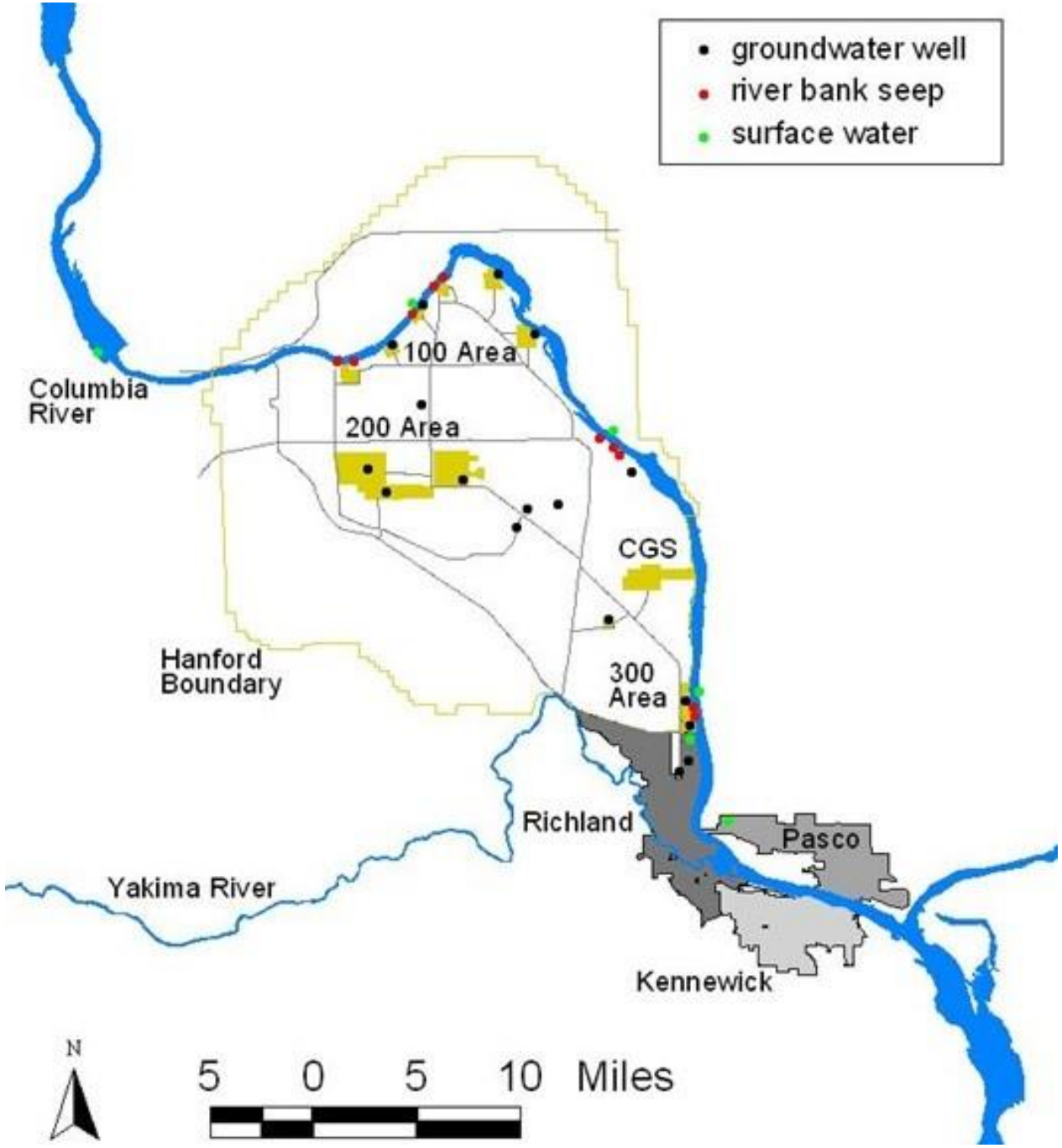
- Inspection every emission unit at least once every three years
- Inspections consist of a combination of document review and physical walkdowns
- Conduct hi-volume grab air samples during CERCLA demolition activities

Hanford Site Air Monitoring Locations



Environmental Sciences activities at Hanford

- Quality Assurance and Control of DOE Environmental Monitoring Programs
- Technical review of clean-up plans
- Provide technical assistance in regulatory sample collection.
- Assessment of unplanned radiological releases



Hanford Site Water Monitoring Locations

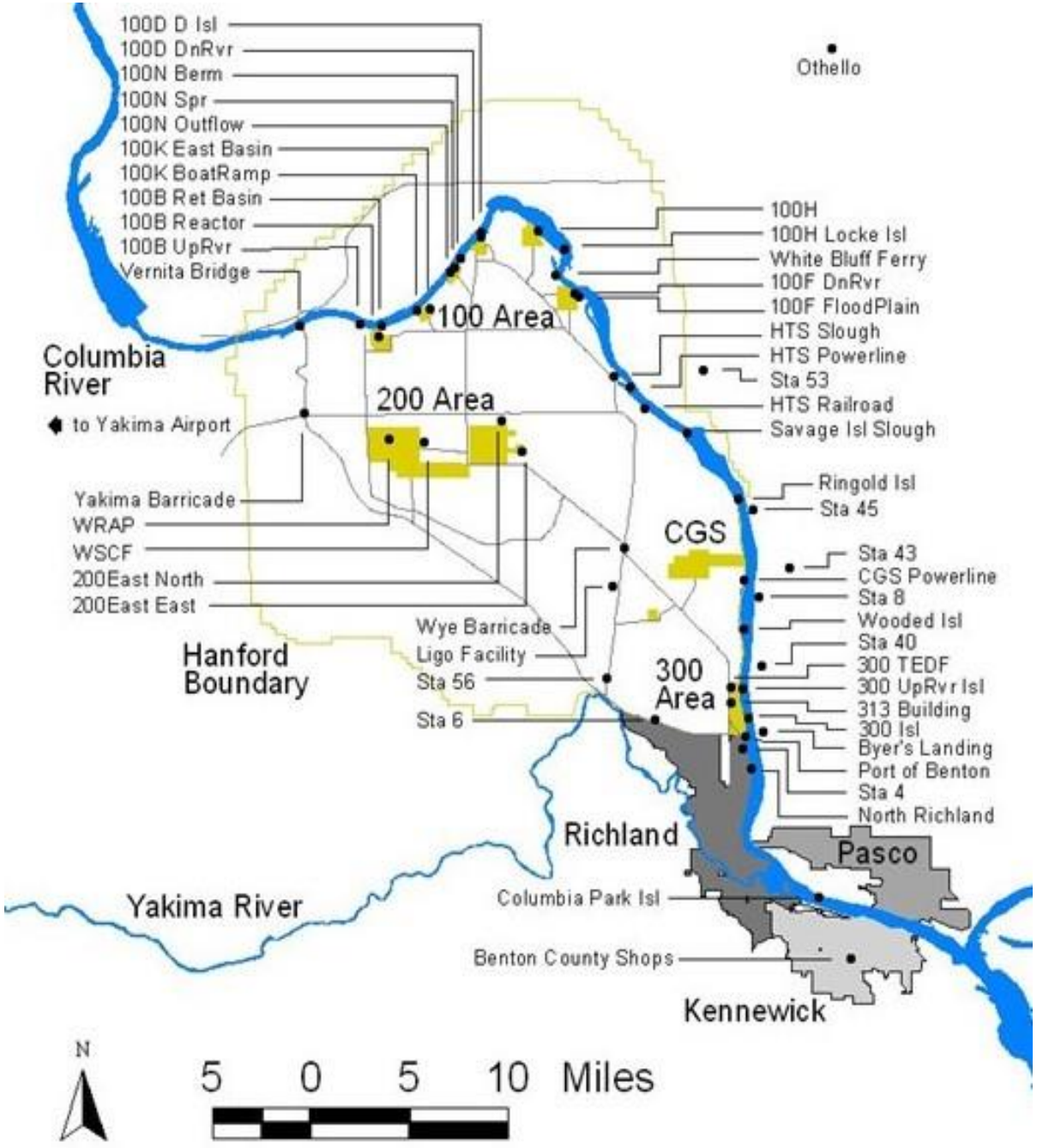
In 2022 our sample schedule included:

- 888 Unique samples
- 3,058 Analyses
- 33 Media (types of samples)
- 129 Locations

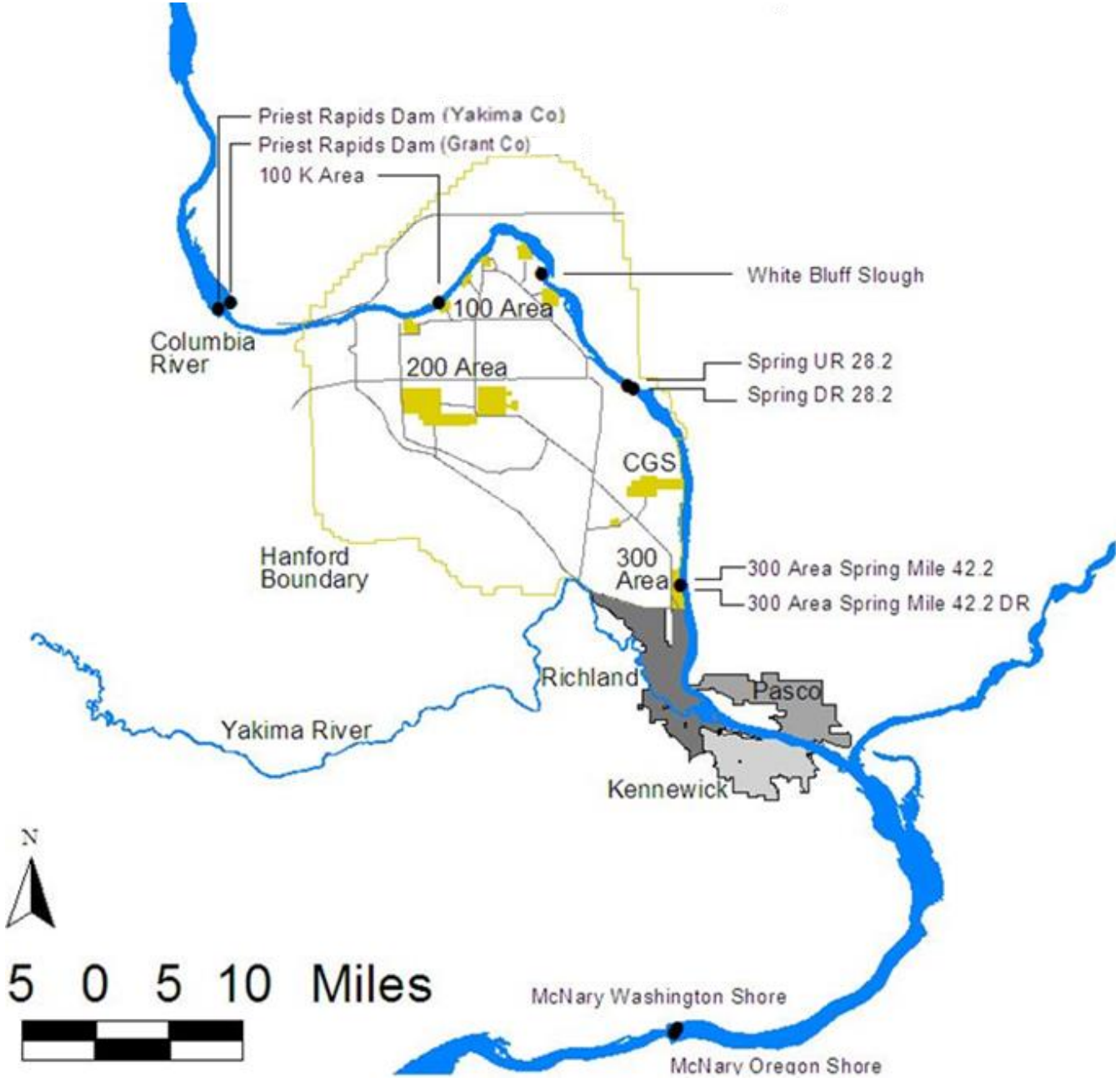
Examples of samples collected:

Air, direct radiation, soil, sediment, surface water, ground water, seep water, drinking water (LIGO, 400 Area, Edwin Markham, and the Richland intake), bass, geese, quail, wine (white and red), corn, apricot, potato, peach, melon, leafy vegetable, and elk.

Hanford Site TLD Locations



Hanford Sediment Monitoring Locations



Radiological Incident Response

- Coordination of protective actions at the local, state, tribal, and federal level
- Assumption of impact through facility data, meteorological network, and computer generated impact
- Verification by environmental surveys and environmental sampling
- Screening of the public for radioactive contamination
- Support of hospital response for contaminated/injured
- Communication of health risk based on exposure to hazard generated

Today's speakers

- Office of Radiation Protection - doh.wa.gov/radiation
- Ryan Miller – Department of Ecology
- Annagrisel Alvarez– Department of Ecology

Questions, comments or ideas?

@ecyHanford

EcologyWAHanford

Hanford@ecy.wa.gov