

Ute Mountain Ute Tribe Air Quality Program Radon Projects



Environmental Programs Department
Air Quality Program Manager
Janice Archuleta

- **Ute Mountain Ute Tribe and Reservation**

Topics:

- Introduction to UMUT
- UMUT Radon Funding and Projects
- Scope of radon in the geographic area
 - Uranium Mill
 - White Mesa Radiological Project
 - Neighboring Uranium Mill
 - Uranium Mines



“The Ute people are the oldest residents of Colorado, inhabiting the mountains and vast areas of Colorado, Utah, Wyoming, Eastern Nevada, Northern New Mexico and Arizona. According to tribal history handed down from generation to generation, our people lived here since the beginning of time.”

From the Southern Ute Indian Tribe Website

Ute Mountain Ute Tribe and Reservation

- **Homeland for the Weeminuche Band – 2,200 members.**
- **Located in extreme southwestern Colorado, with portions extending in southeastern Utah and northwestern New Mexico.**
- **933 square miles in total area of trust land. 43 square miles of fee land.**

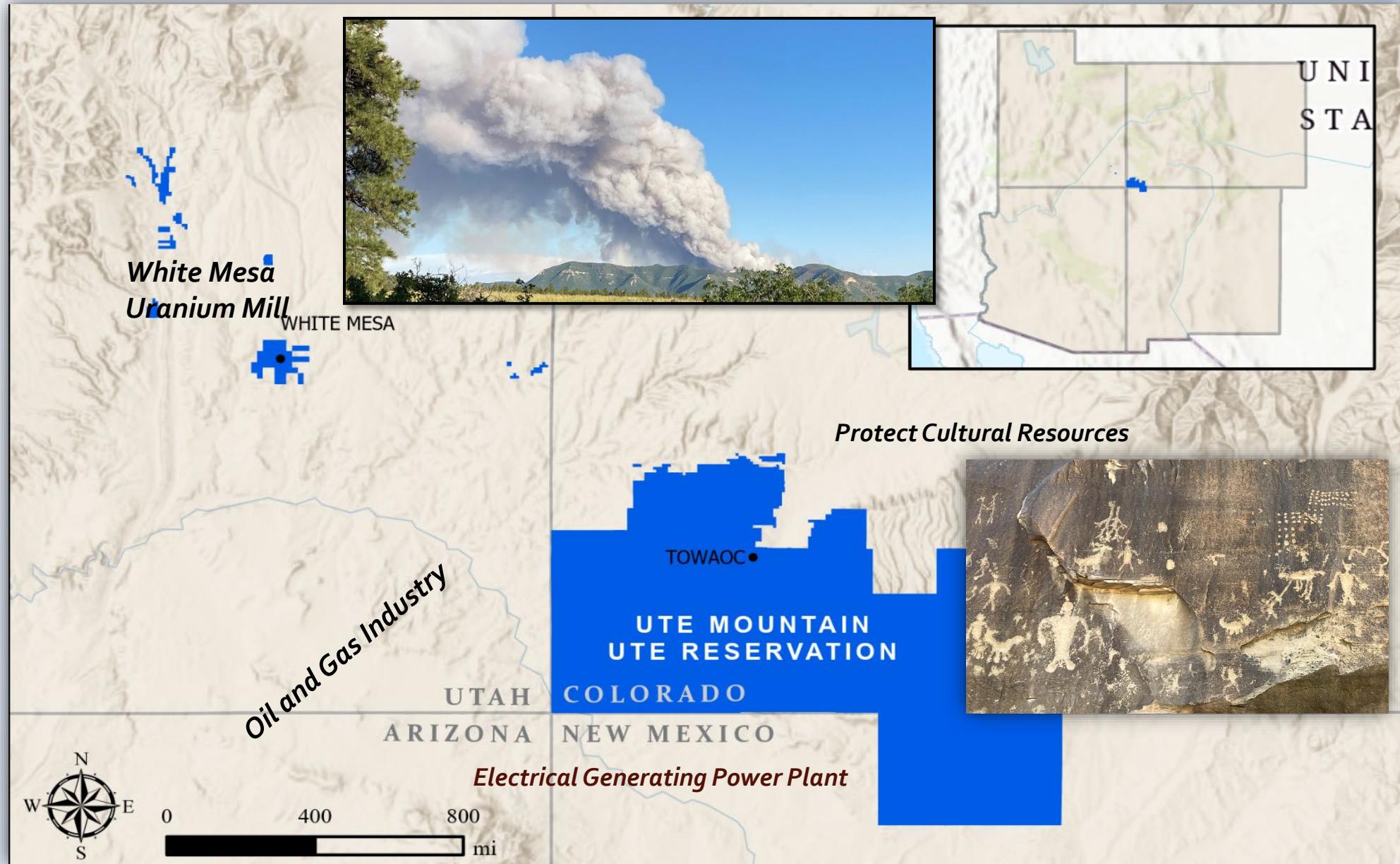


Map:

Map: Ute Mountain Ute Tribe

major sources of

- **Major Sources of Pollutants**
- **Concerns**



Funding for Radon Projects

- EPA Grants for Tribal Air Monitoring Programs Funding
 - CAA 103 and 105 cannot be used for Indoor Air Monitoring of Radon,
 - GAP grants can be used
- State and Indoor Radon Grants (SIRG)
 - Match requirements are often prohibiting for Tribes
 - Match Waiver if included in the PPG (Environmental Grants)
- EPA EJ Grant (small grant: \$70K) – 2021 to 2024 (project specific)
- Other – Depends on Administration

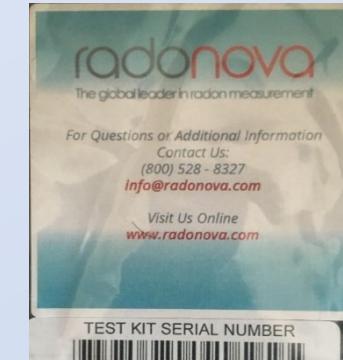


Indoor Radon Projects

EPA requires Quality Assurance Project Plans for every project – Indoor and Ambient Radon Measurements

• Measurements

- **Pre- 2019** – Tribal Buildings' Survey and Homeowners (Request) in 2014-2015, (226 devices) and homes (33 devices) including retesting
- 2019 - 2020 – Tribal Buildings (200 devices)
 - Education (retest 5 years)
 - Head Start (Towaoc and White Mesa)
 - K-12 Education (Towaoc and White Mesa)
 - Buildings After Renovations
 - Philip Coyote Sr. Building (Tribal Courts)



Indoor Radon Projects

2023 –

- Two Indoor Environmental Air Quality Workshops
 - February 1-hour meetings in Towaoc and White Mesa (offered radon testing kits)
- White Mesa Community meetings – LT/ST testing kits offered
 - 23 distributed, 3 returned for results
- AASTEC/NIHB distributed 42 ST devices
 - Philip Coyote Sr. Building - Director requested IEAQ Basement Inspection: Asbestos, Mold, and Radon (10 radon kits)





Indoor Radon Projects

2024 –

Kwiyagat Community Academy (Tribal Open School – K-3 Grades)
5 year Review of Radon Measurements QAPP; updates to EPA
Quality Assurance Project Plan Standard (S-2)

2025 – SIRG Grant

- **Outreach at Community Housing and Health Fairs**
- **Re-Certification and Professional CE Courses**
- **Radon Measurement Training for Staff**
- **QA Spiking**



Tribal Buildings Surveyed White Mesa Community (total 60 devices)

- Community Center (Administration, Rec Center, Elder Center)
- Community Services Building
- Public Works
- Education Building (Head Start)
- Community Health Building
- **Community members (short term testing)**
 - Performed by staff (16)



Indoor Air Projects

- Do-It –Yourself Air Cleaner Workshops



DIY Air Purifier Workshop

Indoor Air Sensor – VOC, CO₂, CO

Air Quality Program

Two Air Quality Stations:

White Mesa, UT

Towaoc, CO

- Total Suspended Particulate
 - White Mesa Radiological Project
- Ozone- Portable Monitoring System
- PM Sensor –Purple Air
- Meteorological Parameters

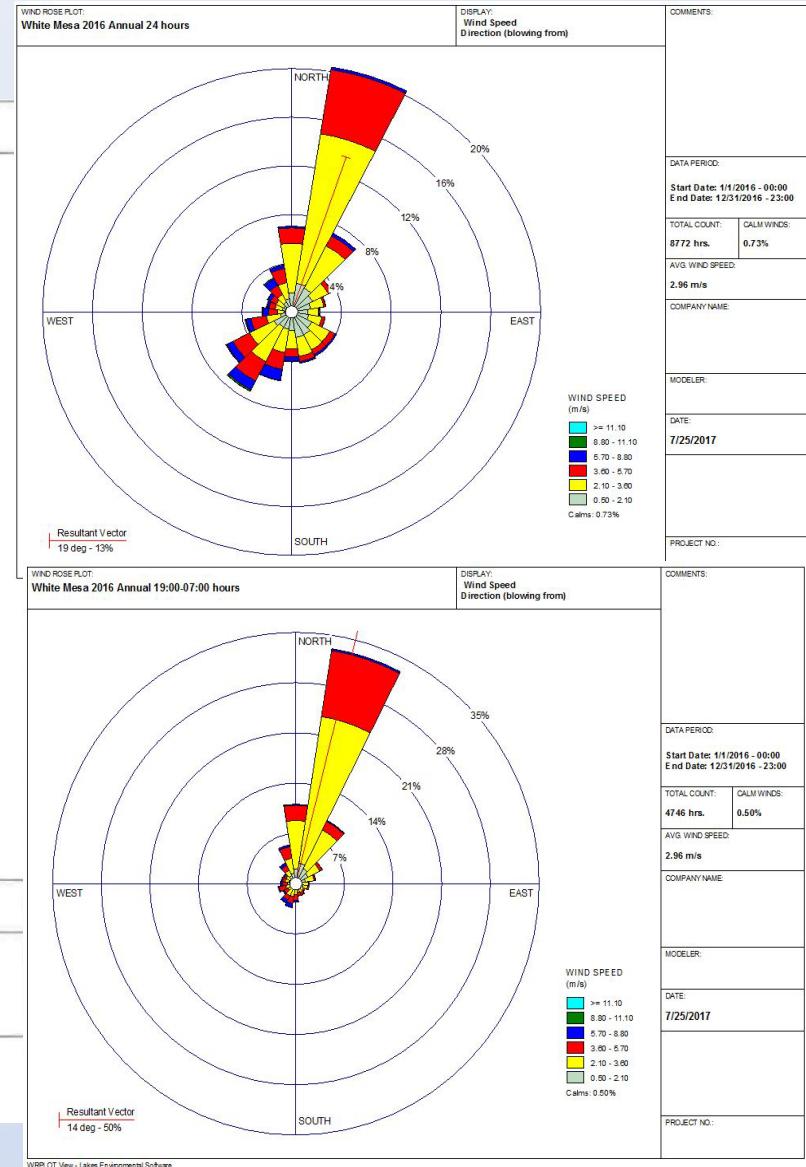
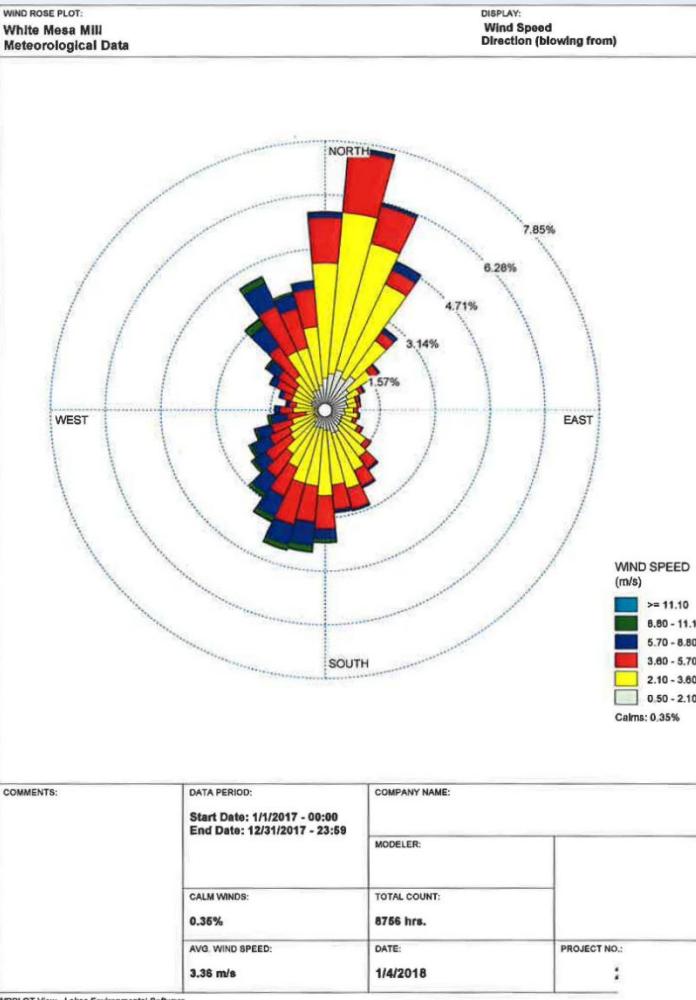
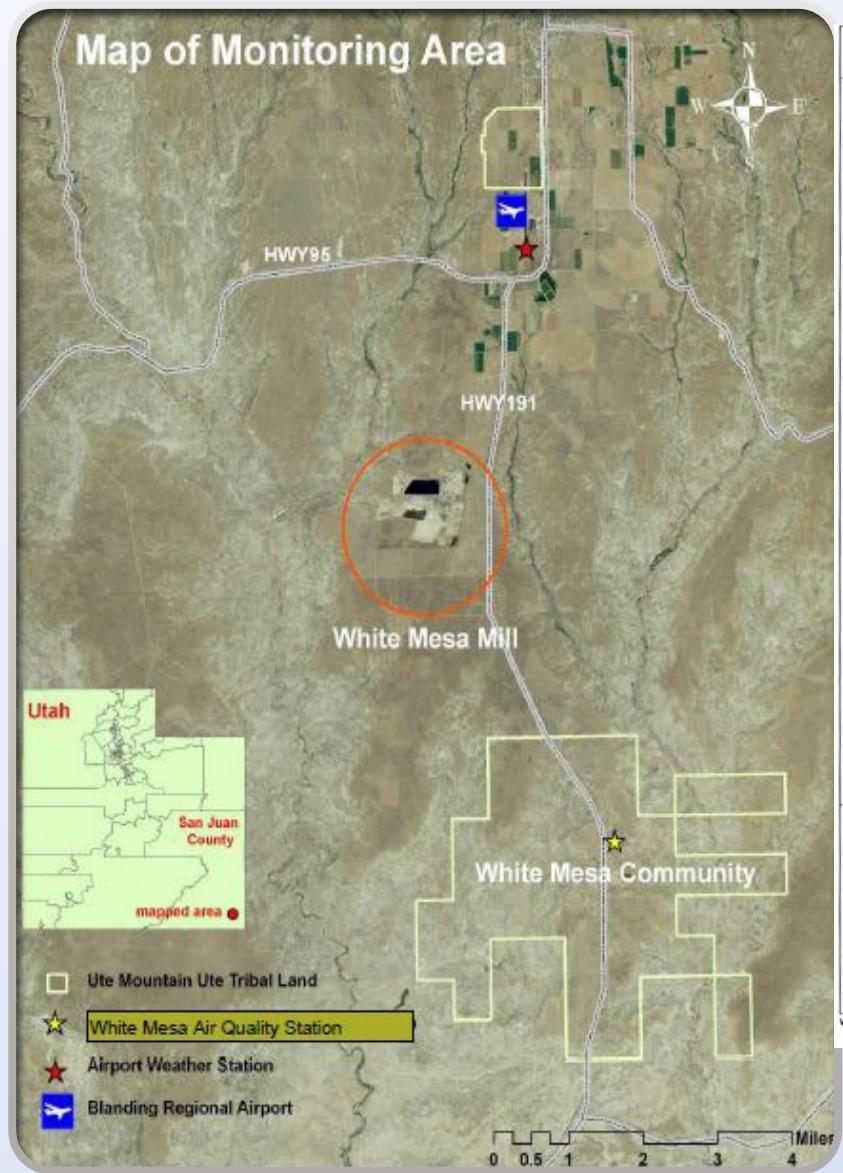


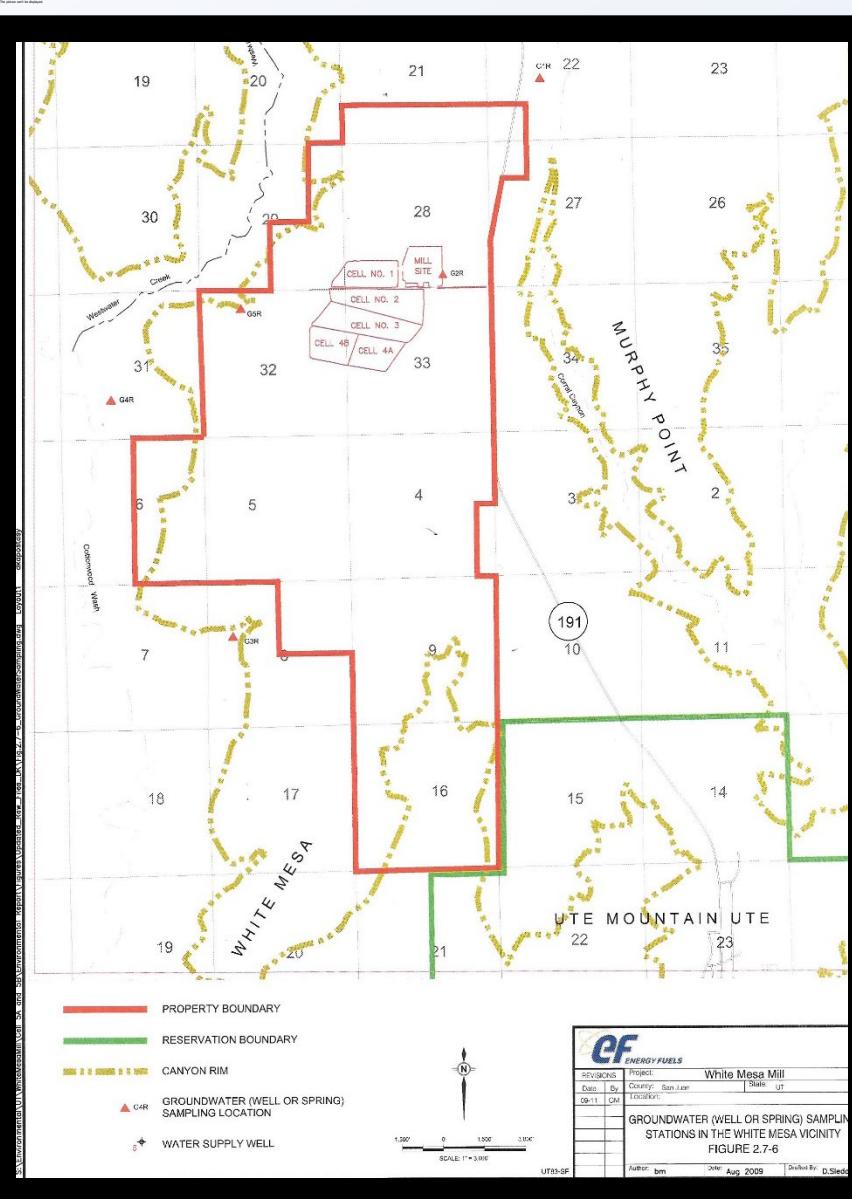
- Ozone- Regulatory Monitors
- PM – FEM Regulatory Monitors
- PM Sensors
 - QuantAQ
 - AQ Profiler
- Meteorological Parameters

White Mesa, UT



White Mesa Air Quality and Ambient Radon Projects- Background





White Mesa Air Quality and Ambient Radon Project- Background

Map and Image (Google) of White Mesa Mill site in Southwest Utah



White Mesa Air Quality and Ambient Radon Project- Background

- The White Mesa Uranium Mill has operated since the 1980's.

Members of the White Mesa Community have a history of concerns with the uranium mill and can 'smell' the off-gases.

In 2012, one of the community members took this photo of the mill.



White Mesa Mill's Liquid Impoundments -Violation of NESHAPS 40 CFR Part 61, subpart W (Oct. 2021 – July 2023)

Tailings Pond 4B (left) - over two-thirds is uncovered by liquid.

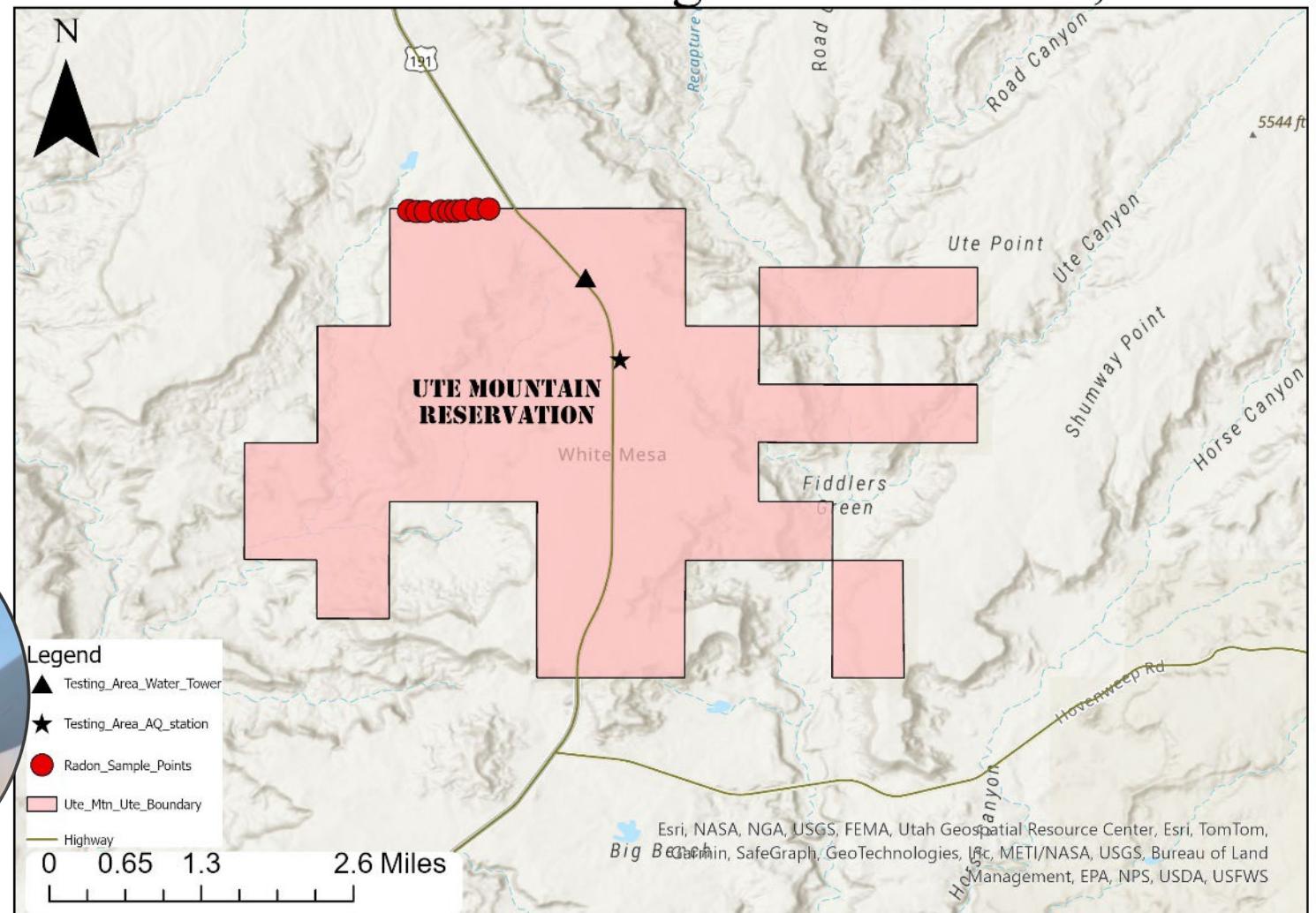
By-product of Mill:
Radon gas is a decay of uranium and is released into atmosphere when not covered with liquid.



Ambient Radon Measurements Project

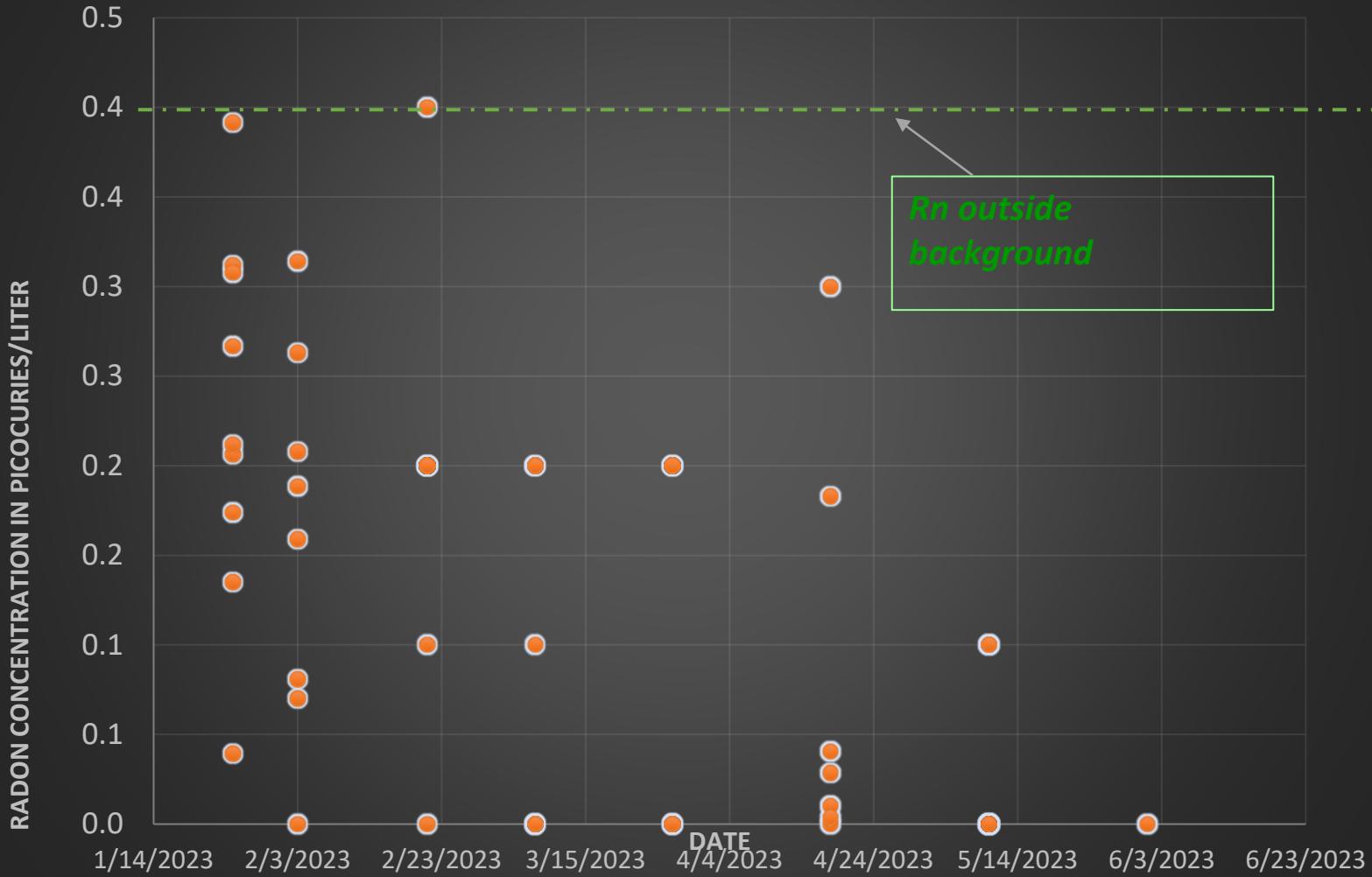


Ambient Radon Testing in White Mesa, UT



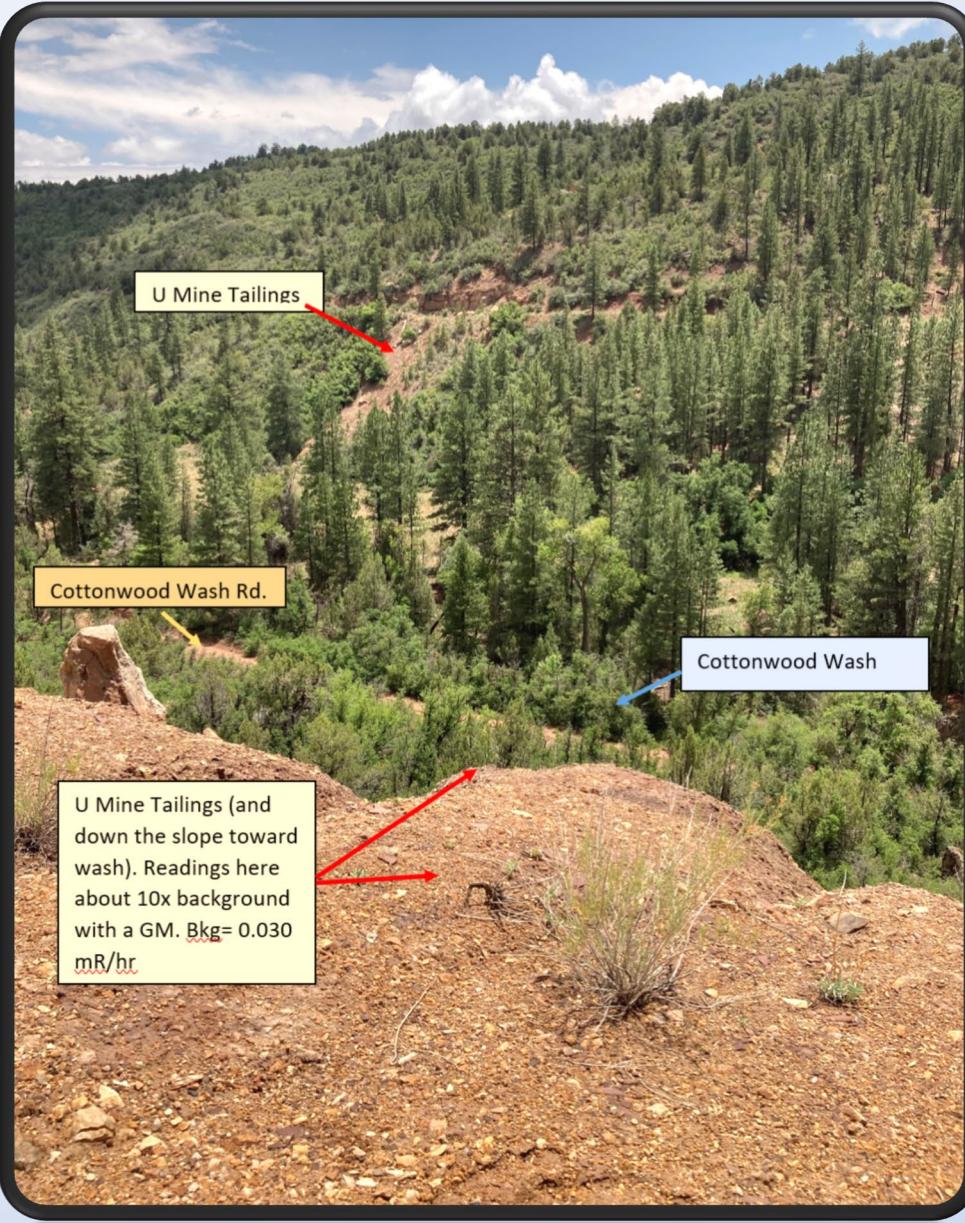
Ambient Radon Results

Outside Radon Measurements at Fenceline



Cottonwood Wash Uranium Mines Radiological Contamination Concerns

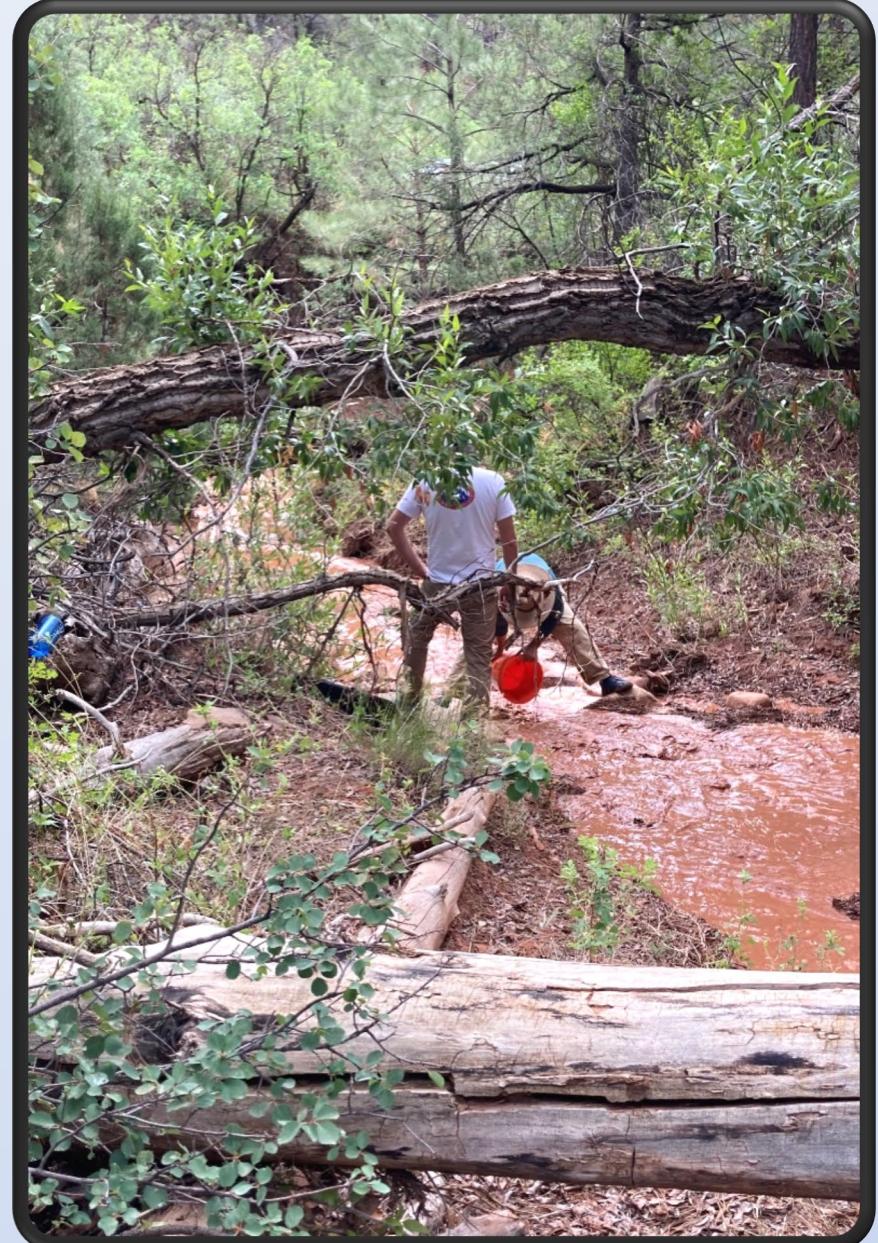
Visit to Cottonwood Wash UT
Uranium Mines
Collaboration of EPA, USGS, DOE,
UMUT (2022)



Cottonwood
Wash Uranium
Mines
Radiological
Contamination
Concerns



Cottonwood Wash after rain event
USGS collecting water samples





Thank You
and Questions

