Soil Samples at Jana Elementary

November 15, 2022

What We Did:

- Soil sampling efforts were extended to soils adjacent to and surrounding Jana Elementary School October 26 - November 4, 2022.
  - **Total number of sample locations**: 126.
  - **Total number of samples sent to the lab**: 790.
  - **Gamma walkover survey of school grounds**: 305,101 data points.

What We Found:

- Soil samples results show no new areas requiring remediation.
  - Current soil sample data indicates that surface and subsurface soil are far below — less than 10% on average — the cleanup goals stated in the Record of Decision for the North St. Louis County Formerly Utilized Sites Remedial Action Program (FUSRAP) Sites.

What We Looked For:

- Historic fill zones.
- Sampling was conducted to look for primary contaminants the U.S. Army Corps of Engineers is responsible for cleaning up under FUSRAP.
  - Uranium-238.
  - Thorium-230.
  - Radium-226.

What It Means:

- The data confirms that contamination requiring remediation is limited to the creek bank.
- The data confirms no path of migration to the school building.

Table 1. Soil Sample Data Summary

	Number of Samples	Mean	Maximum	Remediation Goals
Surface Soil (0-0.5 ft)				
Radium-226 (pCi/g)	111	1.18	1.67	5
Thorium-230 (pCi/g)	111	1.75	4.05	14
Uranium-238 (pCi/g)	111	1.05	3.29	50
SOR_N	111	0.08	0.29	1
Subsurface Soil (0.5 ft to 6 ft)				
Radium-226 (pCi/g)	302	1.27	2.05	15
Thorium-230 (pCi/g)	302	1.89	9.65	15
Uranium-238 (pCi/g)	302	1.11	1.70	50
SOR_N	302	0.03	0.55	1
Subsurface Soil (deeper than 6 ft)				
Radium-226 (pCi/g)	338	1.07	1.97	15
Thorium-230 (pCi/g)	338	1.61	3.12	15
Uranium-238 (pCi/g)	338	1.02	1.98	50
SOR_N	338	0.01	0.09	1
Remediation Area Soil on School Parcel (all depths)				
Radium-226 (pCi/g)	39	1.71	3.01	Remediation goals based on depth were applied as described above.
Thorium-230 (pCi/g)	39	9.13	34.3	
Uranium-238 (pCi/g)	39	1.11	1.47	
SOR_N	39	0.56	2.29	1

Notes: The reported maximum is the greatest detected result. Background concentrations are subtracted in the SOR_N calculation and for comparison to remediation goals.

Legend

- Blue/Green: Background Levels
- Yellow: Slightly Elevated
- Red: Elevated Levels

Legend

- Purple: Systematic Samples
- Green: Biased Samples
- Red: Remediation Areas (on school property
- Jana Elementary School Parcel Borders
- Remediation Areas (not on school property)

Key Takeaways:

- Jana Elementary does not sit on a historic fill zone (building was built on native soil; no fill was brought in for school construction).
- No new soils contamination detected.

US Army Corps of Engineers

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