

USEPA Airplane Survey in the Western Abandoned Uranium (AUM) Mine Region

In the summer of 2018, the U.S. Environmental Protection Agency (USEPA) flew the Airborne Spectral Photometric Environmental Collection Technology (ASPECT) airplane over abandoned uranium mines in Eastern and Western Navajo Nation. This low-flying, radiation-detecting plane collects data that shows radiation levels on the ground. The data will help guide USEPA's efforts to characterize the level and extent of radiation at and around abandoned uranium mines. This fact sheet presents results and example figures from the ASPECT survey in the Western AUM Region, which included Cameron, Cole Mine Canyon and Boadway Gap.

Why Use ASPECT?

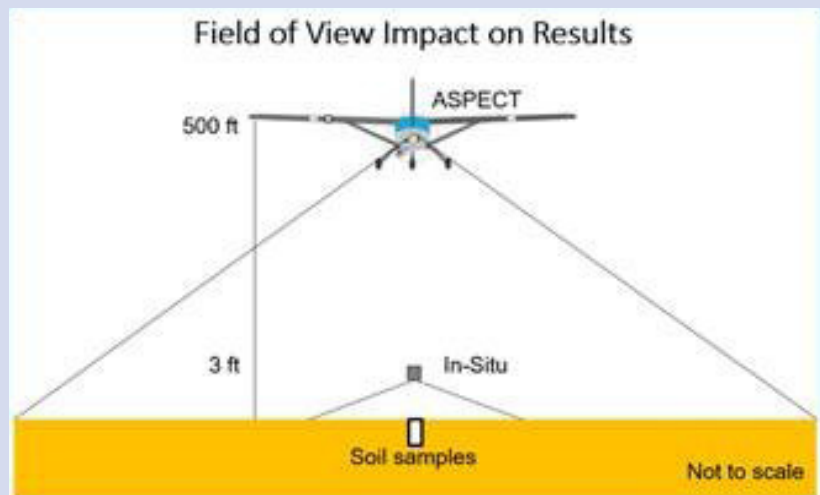


The ASPECT airplane is a cost-effective way to collect radiation data for large areas using state-of-the-art sensors to measure radiation levels on the ground.

The data collected by the ASPECT airplane is useful to understand the location and size of areas that may have radiation at levels of concern.

Data helps USEPA determine where areas of concern exist, so ground surveys can be conducted to determine if elevated areas are mining related.

Understanding ASPECT Airplane Findings



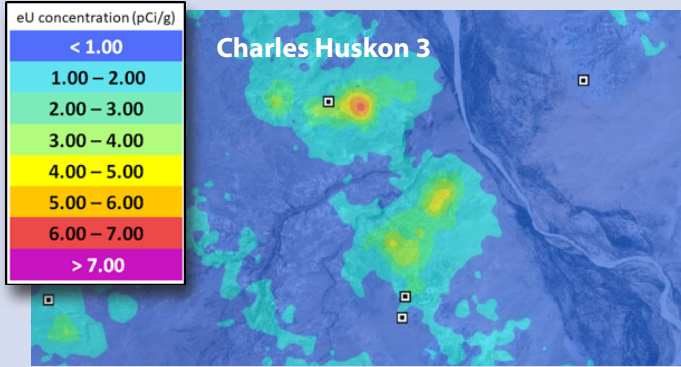
The ASPECT plane fly's at around 300 feet above the ground, which gives it a field of view of approximately 6.5 acres. The data collected provides a general trend of areas containing elevated uranium or thorium levels. The exact area of contamination is further defined by surveys on the ground.

Where did the ASPECT Plane Survey?

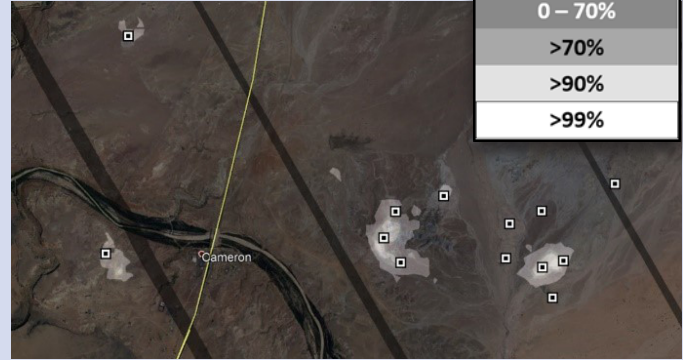
- The ASPECT airplane completed 21 flights in the Western AUM Region that covered more than 350 square miles of land.
- Highway 160 was flown during one of the ASPECT flights as it is proposed to be an ore haul route from mines in the Grand Canyon region.
- Approximately 130,000 data points were collected.



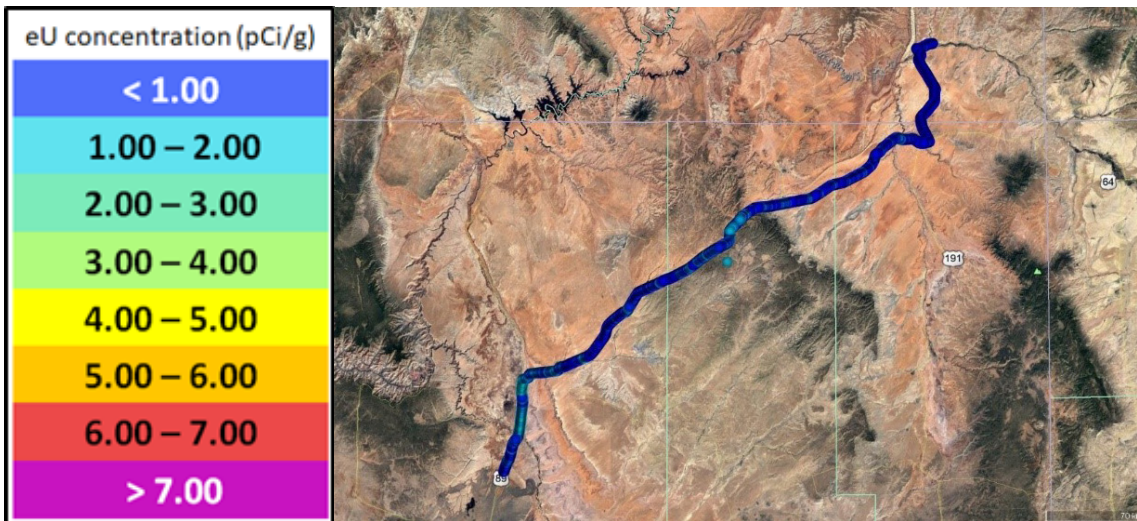
Example Results



Equivalent Uranium (eU) Product of Charles Huskon 3 and surrounding mines. **This image should not be used independently to assess potential health risks. Additional information is necessary to make appropriate health-related or cleanup decisions.**



Probability of Uranium Product (PUP) of A&B No. 3 and surrounding area. **This image should not be used independently to assess potential health risks. Additional information is necessary to make appropriate health-related or cleanup decisions.**



Equivalent Uranium (eU) concentration results along Highway 160.

Results and Next Steps

- The results from the flights show where elevated concentrations of uranium exist around large areas of Western Navajo. This will help guide ground-based investigations to better define the nature and extent of the area's with higher concentrations of uranium and whether those areas are related to mining or are naturally occurring.
- USEPA will continue to work with the Navajo Nation to inform the community of the ongoing efforts to assess all of the funded mines with the Western AUM Region.

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ASPECT information website: www.epa.gov/emergency-response/aspect

USEPA Navajo Abandoned Uranium Mine Region website: www.epa.gov/navajo-nation-uranium-cleanup