

Evaluating Decommissioning Activities

Numerous controls and precautions are in place to minimize the release of radioactivity during decommissioning operations. To evaluate what impact, if any, decommissioning activities are having, NASA has an aggressive environmental sampling program - keeping watch over radiation levels around the facility.

PROJECT SPECIFIC ACTION LIMITS were set for air, surface water, sediments, and groundwater.

NASA collects sampling data on a routine basis and looks at cumulative values because individual results are expected to fluctuate over time given seasonal variations, physical sampling differences and background levels. If cumulative data begin to approach or exceed the action limits for the Reactor Facility, NASA takes steps to answer the following questions:

What type of radionuclide is it?

Is it naturally occurring background radiation?

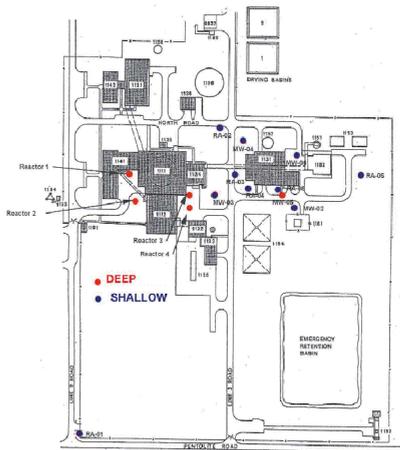
Is it from past Reactor Facility operations?

Is it a result of current decommissioning operations?

Then, NASA takes several possible actions:

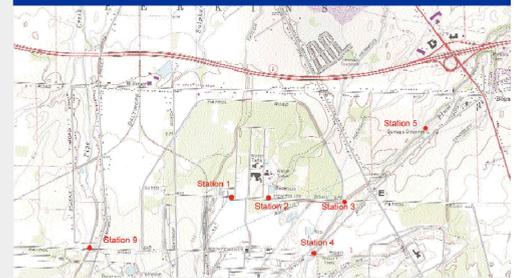
- ▶ Performing further radionuclide specific analyses and conducting additional sampling, where necessary.
- ▶ Conducting a thorough review of existing site operations to determine where the release might be coming from.
- ▶ Identifying engineering and administrative controls that would eliminate the release.
- ▶ And if necessary, using "Stop Work" authority to halt operations until a solution can be found.

GROUNDWATER



ENVIRONMENTAL SAMPLING LOCATIONS

SURFACE WATER & SEDIMENT



Surface Water

Cumulative surface water results from downstream sampling locations 02, 03, and 05 have been similar to results from upstream sampling stations 01, 04, and 09, (which would not have been impacted by Reactor Facility activities).

Groundwater

NASA is conducting additional sampling to evaluate the very slightly elevated value at RA-06.

AIR



Air

Looking for evidence of dust migration, NASA analyzes fenceline air filters for 8 metals commonly found in Reactor Facility building materials. To date, results have been similar to natural conditions.

Sediments

NASA evaluated upward trends seen in sediment sampling results and conducted further radionuclide-specific analyses - showing the presence of Cesium-137, a radionuclide that occurs from non-decommissioning sources accumulating in low-lying ditches and is more readily detected during dry weather.

Increased values can sometimes be the result of seasonal fluctuations (when during dry weather conditions metals accumulate in the sediments and are more readily detected).