

Food and Garden Crops

Gamma analysis of broadleaf vegetation samples revealed naturally occurring gamma emitters K-40 and Be-7 at concentrations comparable to preoperational and background levels.

Cs-137 was also detected at Locations R-1 (indicator) and S-4 (control) during July. The concentrations were 0.0431 pCi/gm and 0.0213 pCi/gm respectively. In addition, Cs-137 was detected at Location G-1 in September, 0.0218 pCi/gm. These concentrations for Cs-137 are attributed to fallout. The range of fallout Cs-137 seen in preoperational samples was 0.0131 to 0.0478 pCi/gm. Also, Cs-137 was not detected in the airborne effluent releases from the plant during the third quarter of 1991. Finally, Cs-134 was not detected, although it would be expected if the occurrence of Cs-137 was related to plant operation (Cs-134 decays with a shorter half-life than Cs-137; detection of Cs-137 alone indicates older fallout as opposed to newly produced fission products).

No other gamma emitters were detected for the remainder of the year, and no effects of plant operation were identified.

In addition to broadleaf vegetation, crop samples were collected which were irrigated with water from the Neosho River below the Wolf Creek Cooling Lake outfall. Gamma analysis revealed naturally occurring K-40 to be present in the samples, with no nuclides detected which could be attributable to plant operation.

Fish

Naturally occurring K-40 was found in all fish samples collected with an average concentration of 4.63 pCi/gm (wet weight) for WCCL samples and 6.88 pCi/gm (wet weight) for the control samples. These concentrations are within the range reported during the preoperational period.

No other radionuclides were detected in fish during the year.

Special Samples (not required by Technical Specifications):

Game Animal and Bird

Naturally occurring K-40 was measured in all game animal and bird samples at concentrations consistent with preoperational levels.

No other radionuclides were detected and no effects of plant operation were seen for this pathway.