Project Number _____

Battelle
Pacific Northwest Laboratories

Internal Distribution

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Date May 23, 1984

To PE Bramson

From KR Price

Subject Monthly Report - May 1984

Summary

Results from routine sampling on and off the Hanford Site showed no appreciable changes from previous results except for positive identification of Iodine-131 in ambient air at two onsite locations.

Penetrating dose measurements were normal at all locations.

Routine Operations

Iodine-131 was positively identified in two charcoal samplers located at 100-N and 100-D Area. The results were very low (0.012 ± 0.005 and 0.014 ± 0.005 pCi/m^3) but represent the first Iodine-131 detected in air within the past five years. The Iodine-131 probably was from a fuel cladding failure at N Reactor that occurred during the sampling period. Very low levels of Iodine-131 also were detected in Columbia River water at the 300 Area sampling station during the same time period.

The first valid sample of ambient air for Krypton-85 analysis since PUREX restart was collected at Sunnyside. The concentration of Krypton-85 (43 ± 7 pCi/m^3) was about twice pre-operational levels in samples collected at Sunnyside. This information, along with that on Iodine-129 in animal thyroids, indicates the extensive dispersion that is possible for gaseous effluents from Hanford operations. Traces of radioactive materials associated with airborne particulate matter would not be expected to travel as far. However, the use of the Sunnyside location as an "upwind background" or "control" site is questionable for easily dispersed materials.

Program Management

The offsite annual report (PNL-5038) was cleared, revised slightly, and sent to printing. Distribution is expected around June 1, 1984.

KRP:gd