



Interoffice Communication

To : Distribution
From : J. V. Uptain
Date : March 30, 1984
Subject : FEBRUARY, 1984 VCM DOSIMETRY PROGRAM PROBLEMS

This memo recounts the problems experienced with the plant's VCM dosimetry program during February, 1984 and the solutions subsequently applied to those problems.

On 2/9/83, the credibility of VCM dosimetry was questioned when it was realized that of the thirty-six samples taken during the month, eleven of them were overexposures. Most of the "overexposures" seemed to lack any validity due to the known absence of VCM contact by the employees being sampled. Routine dosimetry was stopped on 2/9/83 and lab testing of sampling and analytical equipment and procedures begun.

Lab testing continued throughout February, revealing the problem to be analytical equipment defects, principally erratic back-flushing of the Perkin-Elmer F42 Headspace Analyzer. The back-flush problem was further traced to weak vial retaining springs and spacers inserted into the F42 water bath on 2/1/84 for correction of short sample vials. Testing demonstrated that the erratic back-flushing produced an erroneous "base line", adding 1-2 ppm, VCM to test results.

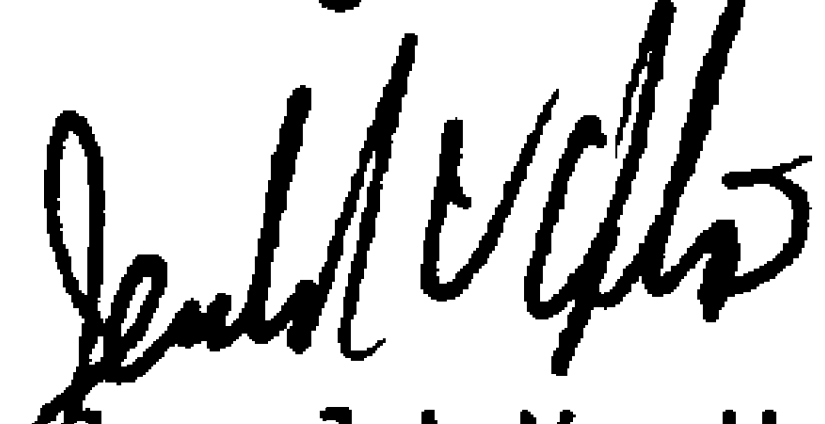
The defects were corrected by removing the spacers and adding an additional vial retaining spring.

During testing, it was also discovered that longer analysis times were required to insure column cleanout between samples.

Routine dosimetry was re-started on 3/1/84 at a reduced rate because of the increased lab analysis time adopted as a result of testing.

All but one of the eleven VCM "overexposures" were discounted as invalid for the reasons noted above. The single overexposure involved a Chief Operator who, using respiratory equipment, helped change VCM filter pack filters.

All of the records associated with the ten discounted samples have been retained, being identified as invalid for reasons also noted.


Gerald V. Uptain

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cc: JF, CRM, PEM, CRS, LPS, RAF, AHS, VAB, DSC