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D/A 030-20934

 Oak Ridge
Associated Universities Post Office Box 117
Oak Ridge, Tennessee 37831-0117

Energy/
Environment
Systems Division

July 8, 1992

Ms. Elizabeth Ullrich
U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406

SUBJECT: DATA RESULTS FOR ROYERSFORD SLUDGE SAMPLES

Dear Ms. Ullrich:

Enclosed are the results of gamma spectroscopy and strontium-90 analyses performed on samples submitted by the Royersford Wastewater Treatment Plant. Data are in units of activity per gram of dry solids for the sludge samples and units of activity per gram of ashed material for the reed sample.

If you have any questions regarding this data, please contact me at 615/576-0065.

Sincerely,

Wade C. Adams

Wade C. Adams
Health Physicist/Project Leader
Environmental Survey and
Site Assessment Program

WCA:ttc

Enclosure

cc: J. Kinneman, NRC/Region I
D. Tiktinsky, NRC/NMSS, 6A4
T. Mo, NRC/NMSS, 6H3
J. Swift/F. Brown, NRC/NMSS, 6H3
M. Landis/ORISE
PMDA
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TABLE 1

**RADIONUCLIDE CONCENTRATIONS MEASURED IN
SLUDGE SAMPLES - DRY WEIGHT (37% TO 41% - SOLIDS) AND
REED SAMPLE - ASHED WEIGHT (WET/ASH RATIO 24.5:1.0) FROM
ROYERSFORD WASTEWATER TREATMENT PLANT**

RADIONUCLIDE CONCENTRATION (pCi/g) Sample Date - June 4, 1992			
Radionuclide	Cell A - Sludge	Cell B - Sludge	'91 Harvest - Reeds
Cr-51	<11	<13	2.4 ± 6.5 ^a
Mn-54	39.3 ± 5.0	65.4 ± 8.1	25.5 ± 3.6
Co-58	1.3 ± 0.7	2.1 ± 1.2	0.9 ± 0.8
Fe-59	<4.1	<5.2	1.0 ± 1.9
Co-60	178 ± 18	295 ± 30	29.1 ± 3.7
Zn-65	25.1 ± 4.0	47.5 ± 6.4	12.0 ± 3.5
Sr-90	3.4 ± 0.3	3.9 ± 0.2	0.1 ± 0.1
Nb-95	<1.8	<2.3	<1.3
Zr-95	<2.6	<3.1	0.8 ± 1.0
Ag-110m	<1.2	<1.3	<0.9
Sb-125	<2.5	2.6 ± 1.8	<1.8
Cs-134	2.1 ± 0.7	4.3 ± 1.1	0.6 ± 0.6
Cs-137	29.6 ± 3.5	46.3 ± 5.4	6.8 ± 1.4

^aUncertainties represent the 95% confidence level based only on counting statistics; additional laboratory uncertainties have not been propagated into these data.