


OAK RIDGE INSTITUTE FOR SCIENCE AND EDUCATION
ENERGY/ENVIRONMENT SYSTEMS DIVISION

May 24, 1994

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

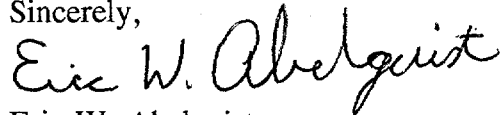
**SUBJECT: DATA RESULTS FOR ROYERSFORD WASTEWATER TREATMENT
FACILITY SAMPLES (RFTA 94-017)**

Dear Ms. Ullrich:

Attached are the results of analyses, performed on samples associated with the test reed bed at the wastewater treatment facility in Royersford, PA. Radionuclides quantified by gamma spectrometry are those which have been identified at significant levels by past analyses.

If you have any questions regarding this data, please contact me at (615) 576-3740 or Michele Landis at (615) 576-2908.

Sincerely,



Eric W. Abelquist
Project Leader
Environmental Survey and
Site Assessment Program

MRL:ttc

Attachment

cc: T. Mo, NRC/NMSS, 4E4
D. Tiktinsky, NRC/NMSS, 6E6
J. Kottan, NRC/Region I
J. Beck, ESSAP
J. Berger, ESSAP
M. Landis, ESSAP
PMDA, NRC, 6E6
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**RADIONUCLIDE CONCENTRATIONS
IN SAMPLES FROM
ROYERSFORD WASTEWATER TREATMENT FACILITY
ROYERSFORD, PENNSYLVANIA**

Radionuclide	Radionuclide Concentration (pCi/g)					
	NRC 1A	NRC 1B	NRC 1C ^a	NRC 1C ^b	NRC 2	NRC 3
Sc-46	<1.1	<0.6	<1.5	<0.4	<0.2	2.7 ± 2.2 ^c
Cr-51	<7.5	<13	3.6 ± 11.9	<3.2	1.5 ± 2.1	<58
Mn-54	6.4 ± 1.0	1.0 ± 0.4	6.6 ± 0.9	2.0 ± 0.3	<0.2	41.6 ± 2.8
Co-58	<0.9	<0.6	<1.4	<0.4	<0.2	<4.6
Fe-59	<3.1	<2.0	<4.8	<1.1	<0.7	<17
Co-60	55.1 ± 2.0	0.8 ± 0.3	73.7 ± 1.6	18.2 ± 0.7	0.6 ± 0.2	330.7 ± 5.6
Zn-65	1.5 ± 1.1	<1.2	3.4 ± 1.6	0.7 ± 0.6	<0.4	31.0 ± 6.3
Nb-95	<1.5	<1.4	<2.6	<0.5	<0.5	<8.5
Zr-95	<1.6	<1.0	<2.4	<0.6	<0.5	<7.8
Ag-110 m	<0.5	<0.4	<0.7	<0.2	<0.1	<2.5
Sb-125	<1.2	<0.8	<1.4	<0.5	<0.3	<4.8
Cs-134	0.9 ± 0.4	<0.3	0.9 ± 0.3	0.2 ± 0.1	<0.1	4.9 ± 1.4
Cs-137	12.6 ± 0.8	<0.4	18.9 ± 0.8	7.6 ± 0.4	0.2 ± 0.1	73.8 ± 2.8

^aReed plant (vegetation).

^bSoil associated with reed plant.

^cUncertainties represent the 95% confidence level, based only on counting statistics.