

March 8, 2001

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

37-23341-01
030-20934

SUBJECT: REVISED REPORT FOR ANALYSIS OF REED BED SAMPLES COLLECTED, AUGUST 12, 1999 THROUGH SEPTEMBER 2, 1999, FROM ROYERSFORD WASTEWATER TREATMENT FACILITY, ROYERSFORD, PENNSYLVANIA (DOCKET NO. 030-20934, RFTA NO. 99-017)

Dear Ms. Ullrich:

This letter is being revised to correct the units associated with the strontium-90 data in Table 1. The original units were presented in pCi/g wet. The units should have been presented as pCi/g dry. The correct units have been inserted into Table 1.

The Environmental Survey and Site Assessment Program (ESSAP) of the Oak Ridge Institute for Science and Education (ORISE) performed strontium-90, tritium, gamma spectroscopy, and percent moisture analyses on 6 sludge and 13 liquid samples from the Royersford Wastewater Treatment Facility, Royersford, Pennsylvania. The results are presented in Tables 1 through 7, respectively.

ESSAP's Quality Control (QC) procedures were followed for these analyses. Analytical and instrumentation QC for these analyses were within acceptable limits. The QC files are available for your review upon request.

We apologize for any inconvenience this reporting error may have caused. Please contact me at (865) 241-3242 or Wade Ivey at (865) 576-9184, with any questions or comments.

Sincerely,

Dale Condra

Dale Condra
Laboratory Manager
Environmental Survey and
Site Assessment Program

RDC:ar

Enclosure

cc: R. Clement, NRC/NMSS/TWFN/7F27
E. Knox-Davin, NRC/NMSS/TWFN/8A23
J. Kottan, NRC/Region I
W. Beck, ORISE/ESSAP

E. Abelquist, ORISE/ESSAP
T. Vitkus, ORISE/ESSAP
W. Ivey, ORISE/ESSAP
File/737

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TABLE 1
STRONTIUM-90 CONCENTRATIONS
IN SLUDGE SAMPLES
ROYERSFORD WASTEWATER TREATMENT FACILITY
ROYERSFORD, PENNSYLVANIA

ESSAP SAMPLE ID	NRC SAMPLE ID	Sr-90 Concentration (pCi/g dry)	MDC (pCi/g dry)
0737M015	Sample #1 sludge dewatering filter cake	1.21 ± 0.27 ^a	0.34
0737M016	Sample #2 sludge filter pressed cake	1.42 ± 0.28	0.33
0737M017	Sample #3 sludge filter cake	2.29 ± 0.33	0.34
0737M018	Sample #4 sludge dewatering filter cake	1.48 ± 0.28	0.34
0737M019	Sample #5 pressed filter cake	1.80 ± 0.31 ^a	0.36
0737M020	Sample #5 sludge filter cake	0.86 ± 0.29	0.41

^a Uncertainties are total propagated uncertainties at the 95% confidence level.

TABLE 2

**STRONTIUM-90 CONCENTRATIONS
IN LIQUID SAMPLES
ROYERSFORD WASTEWATER TREATMENT FACILITY
ROYERSFORD, PENNSYLVANIA**

ESSAP SAMPLE ID	NRC SAMPLE ID	Sr-90 Concentration (pCi/L)	MDC (pCi/L)
0737M021	Sample #1 sludge dewatering, polymer added	48 ± 17^a	25
0737M022	Sample #1 primary digester sludge sample, polymer added	14.4 ± 6.7	10
0737M023	Sample #1 sludge dewatering, sludge sample only	33.4 ± 9.8	14
0737M024	Sample #2 dewatering sludge sample, polymer added	39 ± 14	21
0737M025	Sample #3 sludge sample, polymer added, cell A-B	65 ± 18	25
0737M026	Sample #5 sludge sample, polymer added	30.9 ± 9.4	13
0737M027	Sample #1 filtrate from sludge dewatering	-7.9 ± 8.5	16
0737M028	Sample #1 river sample effluent	-4.8 ± 9.3	17
0737M029	Sample #1 filtrate from primary digester	-4.2 ± 8.8	16

TABLE 2 (continued)

**STRONTIUM-90 CONCENTRATIONS
IN LIQUID SAMPLES
ROYERSFORD WASTEWATER TREATMENT FACILITY
ROYERSFORD, PENNSYLVANIA**

ESSAP SAMPLE ID	NRC SAMPLE ID	Sr-90 Concentration (pCi/L)	MDC (pCi/L)
0737M030	Sample #2 filtrate from sludge dewatering	-6.4 ± 8.4	16
0737M031	Sample #3 filtrate from sludge dewatering	0.6 ± 9.1	16
0737M032	Sample #4 filtrate	-1.5 ± 9.2	17
0737M033	Sample #5 filtrate	-3.1 ± 8.8	16

^a Uncertainties are total propagated uncertainties at the 95% confidence level.

TABLE 3

**TRITIUM CONCENTRATIONS
IN LIQUID SAMPLES
ROYERSFORD WASTEWATER TREATMENT FACILITY
ROYERSFORD, PENNSYLVANIA**

ESSAP SAMPLE ID	NRC SAMPLE ID	H-3 Concentration (pCi/L)	MDC (pCi/L)
0737M021	Sample #1 sludge dewatering, polymer added	536 ± 461 ^a	760
0737M022	Sample #1 primary digester sludge sample, polymer added	546 ± 459	757
0737M023	Sample #1 sludge dewatering, sludge sample only	332 ± 455	764
0737M024	Sample #2 dewatering sludge sample, polymer added	312 ± 463	779
0737M025	Sample #3 sludge sample, polymer added, cell A-B	639 ± 473	774
0737M026	Sample #5 sludge sample, polymer added	296 ± 458	772
0737M027	Sample #1 filtrate from sludge dewatering	889 ± 478	765
0737M028	Sample #1 river sample effluent	223 ± 460	780

TABLE 4

**CONCENTRATION OF SELECTED GAMMA EMITTING ISOTOPES
IN SLUDGE SAMPLES
ROYERSFORD WASTEWATER TREATMENT FACILITY
ROYERSFORD, PENNSYLVANIA**

ESSAP SAMPLE ID	NRC REGION I SAMPLE ID	Radionuclide Concentration (pCi/g wet)				
		I-125	Cr-51	Sb-125	Ag-110M	Cs-137
0737M015	Sample #1 sludge dewatering filter cake	4.2 ± 2.8^a	8.2 ± 7.0	2.86 ± 0.73	1.35 ± 0.32	13.69 ± 0.79
0737M016	Sample #2 sludge filter pressed cake	12.7 ± 4.7	1.7 ± 9.1	2.86 ± 0.52	0.98 ± 0.24	13.74 ± 0.72
0737M17	Sample #3 sludge filter cake	-6.5 ± 8.5	17.4 ± 4.8	2.69 ± 0.59	1.98 ± 0.39	13.66 ± 0.77
0737M018	Sample #4 sludge dewatering filter cake	4.4 ± 2.3	12.7 ± 5.7	2.75 ± 0.65	2.26 ± 0.41	12.65 ± 0.74
0737M019	Sample #5 pressed filter cake	10.5 ± 4.3	9.9 ± 3.3	2.18 ± 0.49	1.81 ± 0.29	13.13 ± 0.69
0737M020	Sample #5 sludge filter cake	7.7 ± 2.7	18.1 ± 2.9	1.54 ± 0.40	1.49 ± 0.26	10.40 ± 0.56

TABLE 5 (continued)

**CONCENTRATION OF SELECTED GAMMA EMITTING ISOTOPES
IN LIQUID SAMPLES
ROYERSFORD WASTEWATER TREATMENT FACILITY
ROYERSFORD, PENNSYLVANIA**

ESSAP SAMPLE ID	NRC REGION I SAMPLE ID	Radionuclide Concentration (pCi/L)				
		I-125	Cr-51	Sb-125	Ag-110M	Cs-137
0737M028	Sample #1 river sample effluent	18 ± 84	37 ± 71	-3.0 ± 9.1	-1.4 ± 3.6	24.5 ± 8.2
0737M029	Sample #1 filtrate from primary digester	-16 ± 92	75 ± 67	-1.5 ± 12.1	-6.1 ± 4.6	44.5 ± 7.7
0737M030	Sample #2 filtrate from sludge dewatering	20 ± 78	27 ± 72	8.9 ± 9.8	-13.2 ± 4.6	112.5 ± 8.9
0737M031	Sample #3 filtrate from sludge dewatering	-188 ± 215	98 ± 168	11 ± 23	-9.8 ± 9.9	93 ± 19
0737M032	Sample #4 filtrate	-81 ± 227	42 ± 173	18 ± 27	3 ± 12	135 ± 23
0737M033	Sample #5 filtrate	-145 ± 150	89 ± 126	12 ± 21	0.2 ± 9.4	84 ± 17

^a Uncertainties are total propagated uncertainties at the 95% confidence level.

TABLE 6

Royersord Wastewater Treatment Facility (0737) - March 8, 200

TABLE 6 (continued)

**CONCENTRATION OF SELECTED GAMMA EMITTING ISOTOPES
IN LIQUID SAMPLES
ROYERSFORD WASTEWATER TREATMENT FACILITY
ROYERSFORD, PENNSYLVANIA**

ESSAP SAMPLE ID	NRC REGION 1 SAMPLE ID	Radionuclide Concentration (pCi/L)				
		Cs-134	Co-58	Mn-54	Zn-65	Co-60
0737M028	Sample #1 river sample effluent	3.0 ± 3.8	8.2 ± 4.7	1.9 ± 3.5	8.1 ± 7.7	38.8 ± 6.9
0737M029	Sample #1 filtrate from primary digester	5.6 ± 5.4	5.2 ± 9.2	126 ± 13	11 ± 11	132 ± 14
0737M030	Sample #2 filtrate from sludge dewatering	8.8 ± 4.7	86 ± 11	294 ± 19	73 ± 12	709 ± 18
0737M031	Sample #3 filtrate from sludge dewatering	4 ± 12	93 ± 25	290 ± 30	83 ± 40	900 ± 40
0737M032	Sample #4 filtrate	8 ± 13	377 ± 38	740 ± 50	310 ± 50	1500 ± 50
0737M033	Sample #5 filtrate	7 ± 11	60 ± 20	220 ± 30	176 ± 56	920 ± 40

^a Uncertainties are total propagated uncertainties at the 95% confidence level.

TABLE 7

**PERCENT MOISTURE
IN REED BED SAMPLES
ROYERSFORD WASTEWATER TREATMENT FACILITY
ROYERSFORD, PENNSYLVANIA**

ESSAP SAMPLE ID	NRC SAMPLE ID	Percent Moisture ^a
0737M015	Sample #1 sludge dewatering filter cake	83.77
0737M016	Sample #2 sludge filter pressed cake	82.84
0737M017	Sample #3 sludge filter cake	83.26
0737M018	Sample #4 sludge dewatering filter cake	84.17
0737M019	Sample #5 pressed filter cake	82.17
0737M020	Sample #5 sludge filter cake	78.37
0737M021	Sample #1 sludge dewatering, polymer added	96.41
0737M022	Sample #1 primary digester sludge sample, polymer added	98.72
0737M023	Sample #1 sludge dewatering, sludge sample only	97.96
0737M024	Sample #2 sludge dewatering sludge sample, polymer added	96.96
0737M025	Sample #3 sludge sample, polymer added, cell A-B	96.32
0737M026	Sample #5 sludge sample, polymer added	98.14

	:	(FOR LFMS USE)
BETWEEN:	:	INFORMATION FROM LTS
	:	-----
	:	
License Fee Management Branch, ARM	:	Program Code: 03218
and	:	Status Code: 0
Regional Licensing Sections	:	Fee Category: 6A
	:	Exp. Date: 20050831
	:	Fee Comments: CALIBRATION IS FOR THEM
	:	Decom Fin Assur Reqd: Y
	:	::

LICENSE FEE TRANSMITTAL

A. REGION

I

1. APPLICATION ATTACHED

Applicant/Licensee: UNITECH SERVICES GROUP, INC.
 Received Date: 20020212
 Docket No: 3020934
 Control No.: 131047
 License No.: 37-23341-01
 Action Type: Notifications

2. FEE ATTACHED

Amount: _____
 Check No.: _____

3. COMMENTS

Signed M. A. Perkins
 Date 2/13/2002

B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered /__ /)

1. Fee Category and Amount: _____

2. Correct Fee Paid. Application may be processed for:

Amendment _____
 Renewal _____
 License _____

3. OTHER

Signed _____
 Date _____