



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

April 27, 2006

Docket No. 99990001
Docket No. 030-20934

License No. Not applicable
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Steven Torma
Superintendent
Borough of Royersford
Wastewater Treatment Facility
300 Main Street
P. O. Box 188
Royersford, PA 19468

SUBJECT: SAMPLE ANALYSIS RESULTS FROM INSPECTION 99990001/2006001,
WASTEWATER TREATMENT FACILITY, BOROUGH OF ROYERSFORD,
ROYERSFORD, PENNSYLVANIA

Dear Mr. Torma:

A letter dated February 2, 2006, transmitted the report for Inspection 99990001/2006001 [ML060340233], which was performed on January 12, 2006. At that time, analyses of samples collected during the inspection were not completed and, therefore, the results were not included in the report. The results of these analyses are enclosed with this letter.

The enclosed table compares results from past samples to those taken in January 2006. Prior to 2004, UniTech Services Group, Inc. (UniTech) released effluent containing radioactive material to the Royersford Wastewater Treatment Facility (RWTF). UniTech discontinued releases to the RWTF on January 30, 2004. In 2005, samples were collected from the RWTF after the RWTF cleaned their system of materials that might contain residual radioactivity from UniTech. The results of those samples were reported in a letter dated May 4, 2005 [MI051240263, ML051240271, and ML051240276]. In January 2006, samples were collected from the reed bed, and from other systems at the RWTF to confirm the results of samples collected in 2005. These 2006 results confirm that concentrations of radioactive materials at the RWTF are significantly lower than when receiving influent from UniTech, except in the reed bed. Concentrations of radioactive materials in the reed bed are somewhat lower due to radioactive decay.

Also enclosed is a copy of the report of the results of analyses performed by the Oak Ridge Institute for Science and Education (ORISE) of samples collected in January 2006 [ML060820230]. ORISE identified iodine-131 in the primary digester samples. The most likely source of this material, typically used in nuclear medicine diagnosis, is from a patient treated with iodine-131 who returned to a home that is included in the RWTF area. Such patient wastes are allowed to be released because they are not likely to cause exposure to members of the public in excess of regulatory limits. Iodine-131 has a half-life of 8 days.

S. Torma
Borough of Royersford

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No reply to this letter is required. If you have any questions, please contact Betsy Ullrich of this office at (610) 337-5040. Your cooperation with us is appreciated.

Sincerely,

Original signed by John D. Kinneman

John D. Kinneman, Chief
Security and Industrial Branch
Division of Nuclear Materials Safety

Enclosures:

1. Summary of Data Comparison
2. ORISE Report dated February 21, 2006 [ML060820230]

cc w/enclosures:

Daniel R. Neeley, UniTech, Plant Manager/Radiation Safety Officer
Michael Fuller, UniTech, Manager, Health Physics and Engineering
David Allard, PADEP, Bureau of Radiation Protection
Terry Derstine, PADEP
Commonwealth of Pennsylvania

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SISP Review Complete: E Ullrich

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Enclosure 1: Summary of Data Comparison, Results of Samples from the Royersford Wastewater Treatment Facility
(Inspection Report No. 99990001/2006001

Sample Type	Prior to 2004 (incoming material)	2005 (post-cleaning)	January 2006
primary digester sludge	2.7 to 7.6 % solids	3 to 5 % solids	2% solids
	95 to 200 pCi/g (solids) Co-60 31 to 51 pCi/g (solids) Cs-137		2.5 and 2.6 pCi/g Co-60 (solids) 0.55 and 0.65 pCi/g Cs-137 (solids)
		532 to 1435 pCi/l Co-60 50 to 138 pCi/l Cs-137	50.5 and 51.4 pCi/l Co-60 10.9 and 13.0 pCi/l Cs-137
secondary digester sludge	3-6% solids;	1 and 2 % solids	4% solids;
	9,000 to 60,000 pCi/l Co-60 (typical)	32 and 320 pCi/l Co-60	150 and 176 pCi/l Co-60
	1,500 to 5,000 pCi/l Cs-137 (typical)	14 and 36 pCi/l Cs-137	14 and 19 pCi/l Cs-137
reed bed sludge	61 to 80 % moisture	no samples collected	66 to 80% moisture
	53 to 950 pCi/g Co-60 [wet weight]		39 to 212 pCi/g Co-60 [wet weight]
	12 to 90 pCi/g Cs-137 [wet weight]		4 to 22 pCi/g Cs-137 [wet weight]
reeds	64% moisture	no samples collected	13 to 22% moisture
	0.06 to 11 pCi/g Co-60 [wet weight]		0.06 to 0.27 pCi/g Co-60 [wet weight]
	1.36 to 1.87 pCi/g Cs-137 [wet weight]		0.58 to 1 pCi/g Cs-137 [wet weight]
effluent water to river	25 to 70 pCi/l Co-60	3.3 to 5.2 pCi/l Co-60	1.5 and 2.6 pCi/l Co-60
	35 to 60 pCi/l Cs-137	-1.5 to 2.3 pCi/l Cs-137	-3.3 and 4.3 pCi/l Cs-137.