



A SUBSIDIARY OF UNIFIRST CORPORAT ON

NMS83

February 22, 2005

Mr. John D. Kinneman  
U.S. Nuclear Regulatory Commission  
Division of Nuclear Material Safety  
475 Allendale Road  
King of Prussia, PA 19406-1415

03020934

RE: License No. 37-23341-01 Quarterly Report – 4<sup>th</sup> Quarter 2005

Dear Mr. Kinneman:

In accordance with License Condition No. 17, enclosed is the quarterly report for the referenced period for discharges made pursuant to License Condition No. 16. The resulting pathway analysis, calculated in the manner provided in UniTech's letter dated July 24, 1998, indicates a maximum potential quarterly adult CEDE of  $9.88 \times 10^{-3}$  millirem and a 2005 total annual adult CEDE of  $2.67 \times 10^{-2}$  millirem.

During preparation of this report, UniTech identified a typographical error in the reports provided to the NRC for the 1<sup>st</sup> through 3<sup>rd</sup> quarter 2005. Table 1 and Table 2 headings erroneously referenced calendar year 2004, instead of 2005. UniTech has verified that these reports are correct for calendar year 2005. UniTech apologies for any confusion this typo may cause. For clarification and your convenience, UniTech has included with this report, copies of the previous Tables with the correct heading.

If you have questions regarding this information, do not hesitate to contact me at your earliest convenience. I may be reached directly at 610-948-9700, extension 19.

Sincerely,

UniTech Services Group, Inc.

Glenn Roberts  
Health Physicist

RECEIVED  
REGION 1

FEB 23 AM 10: 27

cc: Michael Fuller, Manager, Health Physics and Engineering  
Dan Neely, Plant Manager/RSO  
John Wudyka, Radiation Protection Engineer

138472

NMSS/RGNI MATERIALS-002

**UniTech Table 1**  
**Royersford Concentrations and Volumes**

2005 - ROYERSFORD WASTEWATER CONCENTRATIONS (uCi/ml)												
MONTH	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT	OCT	NOV	DEC
GALLONS	339613	445938	1056810	762478	302088	327320	238723	247622	397869	742928	470031	337043
H-3	5.01E-06	5.01E-06	5.01E-06	1.12E-04	1.12E-04	1.12E-04	3.14E-04	3.14E-04	3.14E-04	2.77E-04	2.77E-04	2.77E-04
C-14	6.66E-07	6.66E-07	6.66E-07	5.36E-08	5.36E-08	5.36E-08	3.49E-08	3.49E-08	3.49E-08	1.51E-07	1.51E-07	1.51E-07
K-40	NF	NF	NF	2.51E-07	NF	NF	NF	NF	NF	NF	NF	NF
Cr-51	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Mn-54	3.39E-07	1.38E-07	8.56E-08	1.91E-07	2.05E-08	1.05E-07	8.22E-08	8.26E-08	6.09E-08	5.40E-08	1.88E-07	4.26E-08
Mn-56	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Fe-55	1.90E-06	1.90E-06	1.90E-06	2.20E-06	2.20E-06	2.20E-06	4.94E-07	4.94E-07	4.94E-07	2.11E-06	2.11E-06	2.11E-06
Fe-59	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Co-57	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Co-58	3.20E-08	NF	1.42E-07	1.16E-07	3.44E-08	8.74E-08	7.69E-08	9.70E-08	3.25E-08	1.96E-08	1.61E-07	9.55E-08
Co-60	7.93E-07	4.74E-07	2.68E-07	3.73E-07	1.50E-07	4.54E-07	3.74E-07	3.51E-07	3.01E-07	2.61E-07	8.07E-07	2.78E-07
Ni-59	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Ni-63	2.51E-07	2.51E-07	2.51E-07	1.47E-07	1.47E-07	1.47E-07	2.27E-07	2.27E-07	2.27E-07	8.29E-08	8.29E-08	8.29E-08
Zn-65	NF	NF	3.75E-08	NF	NF	NF	NF	NF	NF	NF	6.69E-08	NF
Sr-89	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Sr-90	5.62E-09	5.62E-09	5.62E-09	7.23E-09	7.23E-09	7.23E-09	2.25E-08	2.25E-08	2.25E-08	2.01E-08	2.01E-08	2.01E-08
Zr-95	NF	NF	NF	NF	1.28E-08	NF	NF	NF	NF	NF	NF	NF
Nb-95	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Tc-99	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA
Ag-110m	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Sn-113	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Sb-125	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
I-125	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
I-129	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA
Cs-134	NF	1.99E-08	3.31E-08	NF	NF	NF	NF	NF	3.46E-08	6.93E-08	5.10E-08	4.62E-08
Cs-137	1.43E-07	2.22E-07	3.27E-07	2.49E-07	1.75E-07	2.11E-07	2.10E-07	4.56E-07	3.18E-07	3.42E-07	5.31E-07	4.09E-07
Eu-152	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Eu-154	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Eu-155	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Pb-212	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Pb-214	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Ra-226	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Ac-228	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Th-228	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	1.02E-09	1.02E-09	1.02E-09	<MDA	<MDA	<MDA
Th-230	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	1.48E-10	1.48E-10	1.48E-10	2.68E-09	2.68E-09	2.68E-09
Th-231	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
Th-232	1.09E-09	1.09E-09	1.09E-09	<MDA	<MDA	<MDA	8.33E-10	8.33E-10	8.33E-10	7.37E-10	7.37E-10	7.37E-10
Th-234	3.56E-07	3.90E-07	NF	3.50E-07	3.91E-07	3.11E-07	2.88E-07	2.76E-07	NF	NF	NF	NF
U-234	1.80E-10	1.80E-10	1.80E-10	4.28E-10	4.28E-10	4.28E-10	4.92E-10	4.92E-10	4.92E-10	9.28E-10	9.28E-10	9.28E-10
U-235	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	1.60E-10	1.60E-10	1.60E-10	<MDA	<MDA	<MDA
U-236	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA
U-238	3.18E-10	3.18E-10	3.18E-10	2.88E-10	2.88E-10	2.88E-10	2.60E-10	2.60E-10	2.60E-10	2.77E-10	2.77E-10	2.77E-10
Pu-238	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	1.94E-10	1.94E-10	1.94E-10
Pu-239	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	1.08E-10	1.08E-10	1.08E-10	<MDA	<MDA	<MDA
Pu-241	<MDA	<MDA	<MDA	1.97E-08	1.97E-08	1.97E-08	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA
Np-237	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA
Am-241	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	2.26E-10	2.26E-10	2.26E-10	3.44E-10	3.44E-10	3.44E-10
Cm-244	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	3.31E-10	3.31E-10	3.31E-10	<MDA	<MDA	<MDA
CONC.	9.50E-06	9.08E-06	8.73E-06	1.16E-04	1.15E-04	1.16E-04	3.16E-04	3.16E-04	3.16E-04	2.80E-04	2.81E-04	2.80E-04

Notes: NF - Not found in gamma spectra search  
 <MDA - Less than minimum detection limit for analytical method.  
 Sr-89/90 analyzed and reported as total Sr unless >50 pCi/L. Conservatively assigned to Sr-90

**UniTech Table 2**  
**Royersford Activities for Pathway Input**

2005 - ROYERSFORD WASTEWATER ACTIVITIES (mCi)												
MONTH	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT	OCT	NOV	DEC
Gallons	339613	445938	1056810	762478	302088	327320	238723	247622	397869	742928	470031	337043
H-3	6.44E+00	8.46E+00	2.00E+01	3.23E+02	1.28E+02	1.39E+02	2.84E+02	2.94E+02	4.73E+02	7.79E+02	4.93E+02	3.53E+02
C-14	8.56E-01	1.12E+00	2.66E+00	1.55E-01	6.13E-02	6.64E-02	3.15E-02	3.27E-02	5.26E-02	4.25E-01	2.69E-01	1.93E-01
K-40				7.25E-01								
Cr-51												
Mn-54	4.36E-01	2.33E-01	3.42E-01	5.50E-01	2.34E-02	1.30E-01	7.43E-02	7.74E-02	9.17E-02	1.52E-01	3.34E-01	5.44E-02
Mn-56												
Fe-55	2.44E+00	3.21E+00	7.60E+00	6.35E+00	2.52E+00	2.73E+00	4.46E-01	4.63E-01	7.44E-01	5.93E+00	3.75E+00	2.69E+00
Fe-59												
Co-57												
Co-58	4.11E-02		5.69E-01	3.34E-01	3.93E-02	1.08E-01	6.95E-02	9.09E-02	4.89E-02	5.52E-02	2.86E-01	1.22E-01
Co-60	1.02E+00	8.00E-01	1.07E+00	1.08E+00	1.72E-01	5.63E-01	3.38E-01	3.29E-01	4.53E-01	7.33E-01	1.44E+00	3.55E-01
Ni-59												
Ni-63	3.23E-01	4.24E-01	1.00E+00	4.24E-01	1.68E-01	1.82E-01	2.05E-01	2.13E-01	3.42E-01	2.33E-01	1.47E-01	1.06E-01
Zn-65			1.50E-01								1.19E-01	
Sr-89												
Sr-90	7.22E-03	9.49E-03	2.25E-02	2.09E-02	8.27E-03	8.96E-03	2.03E-02	2.11E-02	3.39E-02	5.65E-02	3.58E-02	2.56E-02
Zr-95					1.46E-02							
Nb-95												
Tc-99												
Ag-110m												
Sn-113												
Sb-125												
I-125												
I-129												
Cs-134		3.35E-02	1.32E-01						5.20E-02	1.95E-01	9.07E-02	5.89E-02
Cs-137	1.83E-01	3.74E-01	1.31E+00	7.19E-01	2.00E-01	2.62E-01	1.90E-01	4.27E-01	4.79E-01	9.62E-01	9.44E-01	5.22E-01
Eu-152												
Eu-154												
Eu-155												
Pb-212												
Pb-214												
Ra-226												
Ac-228												
Th-228							9.22E-04	9.56E-04	1.54E-03			
Th-230							1.34E-04	1.39E-04	2.23E-04	7.54E-03	4.77E-03	3.42E-03
Th-231												
Th-232	1.40E-03	1.84E-03	4.36E-03				7.53E-04	7.81E-04	1.25E-03	2.07E-03	1.31E-03	9.40E-04
Th-234	4.57E-01	6.58E-01		1.01E+00	4.47E-01	3.86E-01	2.61E-01	2.59E-01				
U-234	2.31E-04	3.04E-04	7.20E-04	1.24E-03	4.89E-04	5.30E-04	4.45E-04	4.61E-04	7.41E-04	2.61E-03	1.65E-03	1.18E-03
U-235							1.45E-04	1.50E-04	2.41E-04			
U-236												
U-238	4.09E-04	5.37E-04	1.27E-03	8.31E-04	3.29E-04	3.57E-04	2.35E-04	2.44E-04	3.92E-04	7.79E-04	4.93E-04	3.53E-04
Pu-238										5.46E-04	3.45E-04	2.47E-04
Pu-239							9.76E-05	1.01E-04	1.63E-04			
Pu-241				5.69E-02	2.25E-02	2.44E-02						
Np-237												
Am-241							2.04E-04	2.12E-04	3.40E-04	9.67E-04	6.12E-04	4.39E-04
Cm-244							2.99E-04	3.10E-04	4.98E-04			
TOTAL	1.22E+01	1.53E+01	3.49E+01	3.35E+02	1.32E+02	1.43E+02	2.85E+02	2.96E+02	4.75E+02	7.88E+02	5.00E+02	3.58E+02

# UniTech Table 1

## Royersford Concentrations and Volumes

2005 - ROYERSFORD WASTEWATER CONCENTRATIONS (uCi/ml)												
MONTH	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT	OCT	NOV	DEC
GALLONS	339613	445938	1056810	762478	302088	327320	238723	247622	397869			
H-3	5.01E-06	5.01E-06	5.01E-06	1.12E-04	1.12E-04	1.12E-04	3.14E-04	3.14E-04	3.14E-04			
C-14	6.66E-07	6.66E-07	6.66E-07	5.36E-08	5.36E-08	5.36E-08	3.49E-08	3.49E-08	3.49E-08			
K-40	NF	NF	NF	2.51E-07	NF	NF	NF	NF	NF			
Cr-51	NF	NF	NF	NF	NF	NF	NF	NF	NF			
Mn-54	3.39E-07	1.38E-07	8.56E-08	1.91E-07	2.05E-08	1.05E-07	8.22E-08	8.26E-08	6.09E-08			
Mn-56	NF	NF	NF	NF	NF	NF	NF	NF	NF			
Fe-55	1.90E-06	1.90E-06	1.90E-06	2.20E-06	2.20E-06	2.20E-06	4.94E-07	4.94E-07	4.94E-07			
Fe-59	NF	NF	NF	NF	NF	NF	NF	NF	NF			
Co-57	NF	NF	NF	NF	NF	NF	NF	NF	NF			
Co-58	3.20E-08	NF	1.42E-07	1.16E-07	3.44E-08	8.74E-08	7.69E-08	9.70E-08	3.25E-08			
Co-60	7.93E-07	4.74E-07	2.68E-07	3.73E-07	1.50E-07	4.54E-07	3.74E-07	3.51E-07	3.01E-07			
Ni-59	NF	NF	NF	NF	NF	NF	NF	NF	NF			
Ni-63	2.51E-07	2.51E-07	2.51E-07	1.47E-07	1.47E-07	1.47E-07	2.27E-07	2.27E-07	2.27E-07			
Zn-65	NF	NF	3.75E-08	NF	NF	NF	NF	NF	NF			
Sr-89	NF	NF	NF	NF	NF	NF	NF	NF	NF			
Sr-90	5.62E-09	5.62E-09	5.62E-09	7.23E-09	7.23E-09	7.23E-09	2.25E-08	2.25E-08	2.25E-08			
Zr-95	NF	NF	NF	NF	1.28E-08	NF	NF	NF	NF			
Nb-95	NF	NF	NF	NF	NF	NF	NF	NF	NF			
Tc-99	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA			
Ag-110m	NF	NF	NF	NF	NF	NF	NF	NF	NF			
Sn-113	NF	NF	NF	NF	NF	NF	NF	NF	NF			
Sb-125	NF	NF	NF	NF	NF	NF	NF	NF	NF			
I-125	NF	NF	NF	NF	NF	NF	NF	NF	NF			
I-129	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA			
Cs-134	NF	1.99E-08	3.31E-08	NF	NF	NF	NF	NF	NF			
Cs-137	1.43E-07	2.22E-07	3.27E-07	2.49E-07	1.75E-07	2.11E-07	2.10E-07	4.56E-07	3.18E-07			
Eu-152	NF	NF	NF	NF	NF	NF	NF	NF	NF			
Eu-154	NF	NF	NF	NF	NF	NF	NF	NF	NF			
Eu-155	NF	NF	NF	NF	NF	NF	NF	NF	NF			
Pb-212	NF	NF	NF	NF	NF	NF	NF	NF	NF			
Pb-214	NF	NF	NF	NF	NF	NF	NF	NF	NF			
Ra-226	NF	NF	NF	NF	NF	NF	NF	NF	NF			
Ac-228	NF	NF	NF	NF	NF	NF	NF	NF	NF			
Th-228	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	1.02E-09	1.02E-09	1.02E-09			
Th-230	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	1.48E-10	1.48E-10	1.48E-10			
Th-231	NF	NF	NF	NF	NF	NF	NF	NF	NF			
Th-232	1.09E-09	1.09E-09	1.09E-09	<MDA	<MDA	<MDA	8.33E-10	8.33E-10	8.33E-10			
Th-234	3.56E-07	3.90E-07	NF	3.50E-07	3.91E-07	3.11E-07	2.88E-07	2.76E-07	NF			
U-234	1.80E-10	1.80E-10	1.80E-10	4.28E-10	4.28E-10	4.28E-10	4.92E-10	4.92E-10	4.92E-10			
U-235	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	1.60E-10	1.60E-10	1.60E-10			
U-236	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA			
U-238	3.18E-10	3.18E-10	3.18E-10	2.88E-10	2.88E-10	2.88E-10	2.60E-10	2.60E-10	2.60E-10			
Pu-238	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA			
Pu-239	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	1.08E-10	1.08E-10	1.08E-10			
Pu-241	<MDA	<MDA	<MDA	1.97E-08	1.97E-08	1.97E-08	<MDA	<MDA	<MDA			
Np-237	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA			
Am-241	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	2.26E-10	2.26E-10	2.26E-10			
Cm-244	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA	3.31E-10	3.31E-10	3.31E-10			
CONC.	9.50E-06	9.08E-06	8.73E-06	1.16E-04	1.15E-04	1.16E-04	3.16E-04	3.16E-04	3.16E-04			

Notes: NF - Not found in gamma spectra search  
 <MDA - Less than minimum detection limit for analytical method.  
 Sr-89/90 analyzed and reported as total Sr unless >50 pCi/L. Conservatively assigned to Sr-90

**UniTech Table 2**  
**Royersford Activities for Pathway Input**

2005 - ROYERSFORD WASTEWATER ACTIVITIES (mCi)												
MONTH	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT	OCT	NOV	DEC
Gallons	339613	445938	1056810	762478	302088	327320	238723	247622	397869	0	0	0
H-3	6.44E+00	8.46E+00	2.00E+01	3.23E+02	1.28E+02	1.39E+02	2.84E+02	2.94E+02	4.73E+02			
C-14	8.56E-01	1.12E+00	2.66E+00	1.55E-01	6.13E-02	6.64E-02	3.15E-02	3.27E-02	5.26E-02			
K-40				7.25E-01								
Cr-51												
Mn-54	4.36E-01	2.33E-01	3.42E-01	5.50E-01	2.34E-02	1.30E-01	7.43E-02	7.74E-02	9.17E-02			
Mn-56												
Fe-55	2.44E+00	3.21E+00	7.60E+00	6.35E+00	2.52E+00	2.73E+00	4.46E-01	4.63E-01	7.44E-01			
Fe-59												
Co-57												
Co-58	4.11E-02		5.69E-01	3.34E-01	3.93E-02	1.08E-01	6.95E-02	9.09E-02	4.89E-02			
Co-60	1.02E+00	8.00E-01	1.07E+00	1.08E+00	1.72E-01	5.63E-01	3.38E-01	3.29E-01	4.53E-01			
Ni-59												
Ni-63	3.23E-01	4.24E-01	1.00E+00	4.24E-01	1.68E-01	1.82E-01	2.05E-01	2.13E-01	3.42E-01			
Zn-65			1.50E-01									
Sr-89												
Sr-90	7.22E-03	9.49E-03	2.25E-02	2.09E-02	8.27E-03	8.96E-03	2.03E-02	2.11E-02	3.39E-02			
Zr-95					1.46E-02							
Nb-95												
Tc-99												
Ag-110m												
Sn-113												
Sb-125												
I-125												
I-129												
Cs-134		3.35E-02	1.32E-01						5.20E-02			
Cs-137	1.83E-01	3.74E-01	1.31E+00	7.19E-01	2.00E-01	2.62E-01	1.90E-01	4.27E-01	4.79E-01			
Eu-152												
Eu-154												
Eu-155												
Pb-212												
Pb-214												
Ra-226												
Ac-228												
Th-228							9.22E-04	9.56E-04	1.54E-03			
Th-230							1.34E-04	1.39E-04	2.23E-04			
Th-231												
Th-232	1.40E-03	1.84E-03	4.36E-03				7.53E-04	7.81E-04	1.25E-03			
Th-234	4.57E-01	6.58E-01		1.01E+00	4.47E-01	3.86E-01	2.61E-01	2.59E-01				
U-234	2.31E-04	3.04E-04	7.20E-04	1.24E-03	4.89E-04	5.30E-04	4.45E-04	4.61E-04	7.41E-04			
U-235							1.45E-04	1.50E-04	2.41E-04			
U-236												
U-238	4.09E-04	5.37E-04	1.27E-03	8.31E-04	3.29E-04	3.57E-04	2.35E-04	2.44E-04	3.92E-04			
Pu-238												
Pu-239							9.76E-05	1.01E-04	1.63E-04			
Pu-241				5.69E-02	2.25E-02	2.44E-02						
Np-237												
Am-241							2.04E-04	2.12E-04	3.40E-04			
Cm-244							2.99E-04	3.10E-04	4.98E-04			
TOTAL	1.22E+01	1.53E+01	3.49E+01	3.35E+02	1.32E+02	1.43E+02	2.85E+02	2.96E+02	4.75E+02			

**UniTech Table 1**  
**Royersford Concentrations and Volumes**

2005 - ROYERSFORD WASTEWATER CONCENTRATIONS (uCi/ml)												
MONTH	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT	OCT	NOV	DEC
GALLONS	339613	445938	1056810	762478	302088	327320						
H-3	5.01E-06	5.01E-06	5.01E-06	1.12E-04	1.12E-04	1.12E-04						
C-14	6.66E-07	6.66E-07	6.66E-07	5.36E-08	5.36E-08	5.36E-08						
K-40	NF	NF	NF	2.51E-07	NF	NF						
Cr-51	NF	NF	NF	NF	NF	NF						
Mn-54	3.39E-07	1.38E-07	8.56E-08	1.91E-07	2.05E-08	1.05E-07						
Mn-56	NF	NF	NF	NF	NF	NF						
Fe-55	1.90E-06	1.90E-06	1.90E-06	2.20E-06	2.20E-06	2.20E-06						
Fe-59	NF	NF	NF	NF	NF	NF						
Co-57	NF	NF	NF	NF	NF	NF						
Co-58	3.20E-08	NF	1.42E-07	1.16E-07	3.44E-08	8.74E-08						
Co-60	7.93E-07	4.74E-07	2.68E-07	3.73E-07	1.50E-07	4.54E-07						
Ni-59	NF	NF	NF	NF	NF	NF						
Ni-63	2.51E-07	2.51E-07	2.51E-07	1.47E-07	1.47E-07	1.47E-07						
Zn-65	NF	NF	3.75E-08	NF	NF	NF						
Sr-89	NF	NF	NF	NF	NF	NF						
Sr-90	5.62E-09	5.62E-09	5.62E-09	7.23E-09	7.23E-09	7.23E-09						
Zr-95	NF	NF	NF	NF	1.28E-08	NF						
Nb-95	NF	NF	NF	NF	NF	NF						
Tc-99	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA						
Ag-110m	NF	NF	NF	NF	NF	NF						
Sn-113	NF	NF	NF	NF	NF	NF						
Sb-125	NF	NF	NF	NF	NF	NF						
I-125	NF	NF	NF	NF	NF	NF						
I-129	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA						
Cs-134	NF	1.99E-08	3.31E-08	NF	NF	NF						
Cs-137	1.43E-07	2.22E-07	3.27E-07	2.49E-07	1.75E-07	2.11E-07						
Eu-152	NF	NF	NF	NF	NF	NF						
Eu-154	NF	NF	NF	NF	NF	NF						
Eu-155	NF	NF	NF	NF	NF	NF						
Pb-212	NF	NF	NF	NF	NF	NF						
Pb-214	NF	NF	NF	NF	NF	NF						
Ra-226	NF	NF	NF	NF	NF	NF						
Ac-228	NF	NF	NF	NF	NF	NF						
Th-228	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA						
Th-230	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA						
Th-231	NF	NF	NF	NF	NF	NF						
Th-232	1.09E-09	1.09E-09	1.09E-09	<MDA	<MDA	<MDA						
Th-234	3.56E-07	3.90E-07	NF	3.50E-07	3.91E-07	3.11E-07						
U-234	1.80E-10	1.80E-10	1.80E-10	4.28E-10	4.28E-10	4.28E-10						
U-235	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA						
U-236	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA						
U-238	3.18E-10	3.18E-10	3.18E-10	2.88E-10	2.88E-10	2.88E-10						
Pu-238	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA						
Pu-239	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA						
Pu-241	<MDA	<MDA	<MDA	1.97E-08	1.97E-08	1.97E-08						
Np-237	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA						
Am-241	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA						
Cm-244	<MDA	<MDA	<MDA	<MDA	<MDA	<MDA						
CONC.	9.50E-06	9.08E-06	8.73E-06	1.16E-04	1.15E-04	1.16E-04						

Notes: NF - Not found in gamma spectra search  
 <MDA - Less than minimum detection limit for analytical method.  
 Sr-89/90 analyzed and reported as total Sr unless >50 pCi/L. Conservatively assigned to Sr-90

**UniTech Table 2**  
**Royersford Activities for Pathway Input**

2005 - ROYERSFORD WASTEWATER ACTIVITIES (mCi)												
MONTH	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT	OCT	NOV	DEC
Gallons	339613	445938	1056810	762478	302088	327320	0	0	0	0	0	0
H-3	6.44E+00	8.46E+00	2.00E+01	3.23E+02	1.28E+02	1.39E+02						
C-14	8.56E-01	1.12E+00	2.66E+00	1.55E-01	6.13E-02	6.64E-02						
K-40				7.25E-01								
Cr-51												
Mn-54	4.36E-01	2.33E-01	3.42E-01	5.50E-01	2.34E-02	1.30E-01						
Mn-56												
Fe-55	2.44E+00	3.21E+00	7.60E+00	6.35E+00	2.52E+00	2.73E+00						
Fe-59												
Co-57												
Co-58	4.11E-02		5.69E-01	3.34E-01	3.93E-02	1.08E-01						
Co-60	1.02E+00	8.00E-01	1.07E+00	1.08E+00	1.72E-01	5.63E-01						
Ni-59												
Ni-63	3.23E-01	4.24E-01	1.00E+00	4.24E-01	1.68E-01	1.82E-01						
Zn-65			1.50E-01									
Sr-89												
Sr-90	7.22E-03	9.49E-03	2.25E-02	2.09E-02	8.27E-03	8.96E-03						
Zr-95					1.46E-02							
Nb-95												
Tc-99												
Ag-110m												
Sn-113												
Sb-125												
I-125												
I-129												
Cs-134		3.35E-02	1.32E-01									
Cs-137	1.83E-01	3.74E-01	1.31E+00	7.19E-01	2.00E-01	2.62E-01						
Eu-152												
Eu-154												
Eu-155												
Pb-212												
Pb-214												
Ra-226												
Ac-228												
Th-228												
Th-230												
Th-231												
Th-232	1.40E-03	1.84E-03	4.36E-03									
Th-234	4.57E-01	6.58E-01		1.01E+00	4.47E-01	3.86E-01						
U-234	2.31E-04	3.04E-04	7.20E-04	1.24E-03	4.89E-04	5.30E-04						
U-235												
U-236												
U-238	4.09E-04	5.37E-04	1.27E-03	8.31E-04	3.29E-04	3.57E-04						
Pu-238												
Pu-239												
Pu-241				5.69E-02	2.25E-02	2.44E-02						
Np-237												
Am-241												
Cm-244												
TOTAL	1.22E+01	1.53E+01	3.49E+01	3.35E+02	1.32E+02	1.43E+02						

**UniTech Table 1**  
**Royersford Concentrations and Volumes**

2005 - ROYERSFORD WASTEWATER CONCENTRATIONS (uCi/ml)												
MONTH	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT	OCT	NOV	DEC
GALLONS	339613	445938	1056810									
H-3	5.01E-06	5.01E-06	5.01E-06									
C-14	6.66E-07	6.66E-07	6.66E-07									
K-40	NF	NF	NF									
Cr-51	NF	NF	NF									
Mn-54	3.39E-07	1.38E-07	8.56E-08									
Mn-56	NF	NF	NF									
Fe-55	1.90E-06	1.90E-06	1.90E-06									
Fe-59	NF	NF	NF									
Co-57	NF	NF	NF									
Co-58	3.20E-08	NF	1.42E-07									
Co-60	7.93E-07	4.74E-07	2.68E-07									
Ni-59	NF	NF	NF									
Ni-63	2.51E-07	2.51E-07	2.51E-07									
Zn-65	NF	NF	3.75E-08									
Sr-89	NF	NF	NF									
Sr-90	5.62E-09	5.62E-09	5.62E-09									
Zr-95	NF	NF	NF									
Nb-95	NF	NF	NF									
Tc-99	<MDA	<MDA	<MDA									
Ag-110m	NF	NF	NF									
Sn-113	NF	NF	NF									
Sb-125	NF	NF	NF									
I-125	NF	NF	NF									
I-129	<MDA	<MDA	<MDA									
Cs-134	NF	1.99E-08	3.31E-08									
Cs-137	1.43E-07	2.22E-07	3.27E-07									
Eu-152	NF	NF	NF									
Eu-154	NF	NF	NF									
Eu-155	NF	NF	NF									
Pb-212	NF	NF	NF									
Pb-214	NF	NF	NF									
Ra-226	NF	NF	NF									
Ac-228	NF	NF	NF									
Th-228	<MDA	<MDA	<MDA									
Th-230	<MDA	<MDA	<MDA									
Th-231	NF	NF	NF									
Th-232	1.09E-09	1.09E-09	1.09E-09									
Th-234	3.56E-07	3.90E-07	NF									
U-234	1.80E-10	1.80E-10	1.80E-10									
U-235	<MDA	<MDA	<MDA									
U-236	<MDA	<MDA	<MDA									
U-238	3.18E-10	3.18E-10	3.18E-10									
Pu-238	<MDA	<MDA	<MDA									
Pu-239	<MDA	<MDA	<MDA									
Pu-241	<MDA	<MDA	<MDA									
Np-237	<MDA	<MDA	<MDA									
Am-241	<MDA	<MDA	<MDA									
Cm-244	<MDA	<MDA	<MDA									
CONC.	9.50E-06	9.08E-06	8.73E-06									

Notes: NF - Not found in gamma spectra search  
 <MDA - Less than minimum detection limit for analytical method.  
 Sr-89/90 analyzed and reported as total Sr unless >50 pCi/L. Conservatively assigned to Sr-90





This is to acknowledge the receipt of your letter/application dated

2/22/2006, and to inform you that the initial processing which includes an administrative review has been performed.

NOTIFICATION 37-2334-01  
There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

Please provide to this office within 30 days of your receipt of this card

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A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned Mail Control Number 138472.  
When calling to inquire about this action, please refer to this control number.  
You may call us on (610) 337-5398, or 337-5260.