



Entergy Nuclear Operations, Inc.
Palisades Nuclear Plant
27780 Blue Star Memorial Highway
Covert, MI 49043

April 26, 2007

10 CFR 50.36a
Technical Specification 5.6.3

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Palisades Nuclear Plant
Docket 50-255
License No. DPR-20

2006 Annual Radioactive Effluent Release and Waste Disposal Report

Dear Sir or Madam:

Enclosed is the Entergy Nuclear Operations, Inc. (ENO) 2006 Annual Radioactive Effluent Release and Waste Disposal Report for the Palisades Nuclear Plant (PNP). This report is submitted in accordance with 10 CFR 50.36a(a)(2) and PNP Technical Specification 5.6.3.

This report provides a summary of the quantities of radioactive liquid and gaseous effluent releases and solid radioactive waste processed during the period of January 1, 2006, through December 31, 2006.

Summary of Commitments

This letter contains no new commitments and no revisions to existing commitments.

A handwritten signature in black ink, appearing to read "C. Schwarz".

Christopher J. Schwarz
Site Vice President
Palisades Nuclear Plant

Enclosure (1)

CC Administrator, Region III, USNRC
Project Manager, Palisades, USNRC
Resident Inspector, Palisades, USNRC

JE48
A009

ENCLOSURE 1
2006 ANNUAL RADIOACTIVE EFFLUENT RELEASE
AND WASTE DISPOSAL REPORT
JANUARY 2006 – DECEMBER 2006

2006 Plant Operating History

Palisades Nuclear Plant (PNP) was off line on January 1, 2006, for control rod drive mechanism seal repair and was returned to service on January 6, 2006. PNP was taken off line on April 1, 2006, for refueling outage 18 and returned to service on May 10, 2006. PNP was taken offline on May 11, 2006, when a control rod was discovered uncoupled. The plant was returned to service on May 16, 2006. PNP was taken off line on November 1, 2006, due to a containment air cooler service water leak and was returned to service on November 4, 2006. PNP remained on line for the remainder of 2006.

1. Supplemental Information

A. Batch Releases

Information relating to batch release of gaseous and liquid effluents is provided in Attachment 1, "Batch Releases."

B. Abnormal Releases

None

C. The lower limits of detection (LLDs) required by the Offsite Dose Calculation Manual (ODCM) for gaseous and liquid effluents are provided in Attachment 5, "Lower Limits of Detection for Palisades Effluents."

D. Results of the 2006 Radiochemistry Cross Check Program with Analytics are shown in Attachment 6. Results were in agreement for all isotopes on all three detectors.

E. Radioactive Effluent Monitoring Instrumentation

The ODCM, Appendix A, "Relocated Technical Specifications per NRC Generic Letter 89-01 (TAC No 75060)," Revision 12, requires that any gaseous or liquid effluent monitor out-of-service event greater than 30 days be included in this effluent report.

RIA-1113, waste gas discharge monitor, was out of service at the start of 2006, due to an engineering change modification in progress to replace the original analog monitor with a digital monitor. The modification was completed and the monitor was declared operable on July 14, 2006. The monitor was declared inoperable on August 8, 2006, after failing Technical Specification surveillance test procedure MR-14, Process Monitor Function

Checks – Monthly. The procedure's acceptance criteria had not been updated to account for a change in background count rate for the new digital monitor. The procedure was revised, and the monitor was successfully tested and declared operable on October 6, 2006. The monitor was declared inoperable on November 21, 2006, due to unpredictable monitor response during waste gas decay tank releases. The monitor remains inoperable while the plant and vendor evaluate what actions are necessary to ensure reliable and predictable monitor response. ODCM-required compensatory actions are taken during waste gas decay tank releases while the monitor is inoperable.

RIA-2320, steam generator blowdown tank vent monitor, was inoperable to start 2006. The monitor was declared operable on March 6, 2006. RIA-2320 was declared inoperable on March 23, 2006, due to no meter deflection when placed in the "CAL" position. The monitor was declared operable on June 12, 2006.

RIA-0833, service water monitor, was out of service on April 4, 2006, due to water intrusion that occurred during a heavy rainstorm. The monitor was repaired and declared operable on May 5, 2006.

RIA-5211, turbine sump monitor, was declared inoperable on October 4, 2006, due to failing the function (source) check during surveillance test MR-14. The acceptance criterion was evaluated, source check range was expanded, and MR-14 was revised. The monitor was calibrated, and declared operable on November 8, 2006.

RIA-2326, normal range noble gas stack monitor was declared inoperable on August 26, 2006, due to frequent spiking. The detector was sent to the vendor for repairs, reinstalled, and calibrated. The monitor was declared operable on October 31, 2006.

A PNP self-assessment of the effluent program completed in late 2006, identified that the number and duration of process monitor outages did not meet expectations, and that a higher priority was required to address future monitor out-of-service events. An interdepartmental working group has been established to improve the timeliness of monitors being returned to service.

2. Gaseous Effluents

Attachment 2, "Gaseous Effluents – Summation of Releases," lists and summarizes all gaseous radioactive effluents released during the reporting period. The unidentified beta component was 1.01E-04% of the gaseous release (excluding tritium).

3. Liquid Effluents

Attachment 3, "Liquid Effluents – Summation of Releases," lists and summarizes all liquid radioactive effluents released during the reporting period. The unidentified beta component was 5.09% of the liquid release (excluding tritium).

4. Estimate of Uncertainty

Both the Gaseous and Liquid Summation of Release data sheets include estimates of the uncertainty associated with the measurement of radioactive effluents. These estimates are based on statistical analyses of a series of sample results as described in the ODCM, Appendix A. These results are listed in the "Est Total Error %" columns on the Gaseous and Liquid Summation Reports.

5. Solid Waste

Attachment 4, "Solid Waste," summarizes all solid radioactive waste shipped for burial in 2006, including the waste classification, sources, volume shipped, activity (curies), and principal nuclide content. Radwaste shipments were made either to Barnwell Waste Management Facility, or to Envirocare of Utah, Inc.

6. Summary of Radiological Impact on Man

Doses to individuals and populations were calculated using GASPAR and LADTAP computer program codes. The quarterly values for curies released were input for each nuclide and are summarized as follows:

- A. The offsite air doses at site boundary (0.48 miles south-south east (SSE)) due to noble gases were:

First Quarter -	6.35E-04 millirad beta and 1.51E-04 millirad gamma
Second Quarter -	8.01E-04 millirad beta and 2.72E-04 millirad gamma
Third Quarter -	7.37E-04 millirad beta and 2.48E-04 millirad gamma
Fourth Quarter -	7.05E-04 millirad beta and 2.33E-04 millirad gamma

The maximum noble gas offsite air dose to the nearest residence (0.50 miles south) occurred during the second quarter, when beta and gamma doses were estimated at 5.20E-04 millirad and 1.77E-04 millirad, respectively.

- B. The most restrictive organ dose to an individual in an unrestricted area (based on identified critical receptors) from gaseous effluent releases were:

First Quarter -	2.57E-02 millirem (child thyroid)
Second Quarter -	5.00E-02 millirem (child thyroid)
Third Quarter	2.15E-02 millirem (child thyroid)
Fourth Quarter -	2.01E-02 millirem (child thyroid)

- C. Integrated total body doses to the general population, and average doses to individuals within the population from gaseous effluent release pathways to a distance of 50 miles from the site boundary were:

First Quarter -	9.60E-02 person-rem and 7.27E-05 millirem
Second Quarter-	1.84E-01 person-rem and 1.39E-04 millirem
Third Quarter -	7.94E-02 person-rem and 6.02E-05 millirem
Fourth Quarter -	7.49E-02 person-rem and 5.67E-05 millirem

- D. The maximum total body dose to an individual in unrestricted water-related exposure pathways was:

First Quarter -	8.41E-03 millirem (teen)
Second Quarter-	6.33E-03 millirem (teen)
Third Quarter -	1.09E-02 millirem (teen)
Fourth Quarter -	7.68E-04 millirem (teen)

The maximum organ dose and critical receptor organ was:

First Quarter -	9.42E-03 millirem (teen liver)
Second Quarter-	9.56E-03 millirem (teen liver)
Third Quarter -	1.36E-02 millirem (teen liver)
Fourth Quarter -	1.01E-03 millirem (teen liver)

- E. Integrated total body doses to the general population, and average doses to individuals within the population from liquid effluent release pathways to a distance of 50 miles from the site boundary were:

First Quarter -	1.58E-02 person-rem and 1.20E-05 millirem
Second Quarter-	2.03E-02 person-rem and 1.54E-05 millirem
Third Quarter -	1.62E-02 person-rem and 1.23E-05 millirem
Fourth Quarter -	2.12E-03 person-rem and 1.61E-06 millirem

7. Process Control Program

No changes were made to the process control program.

8. Offsite Dose Calculation Manual

Attachment 7 contains the ODCM, Revision 20, per the requirements of Technical Specification 5.5.1.c.3.

Historically, the 1992-1996 meteorological data has been in close comparison to more recent meteorological data. Based on this comparison no changes were made to the ODCM and the 1992-1996 meteorological data will continue to be used.

An editorial change to the ODCM, Appendix A, was made to revise the due dates for the annual radiological environmental operating report and the annual radioactive effluent release report to match the due dates required by the Technical Specifications. The changes were approved by the Plant Operating Review Committee (PORC) and became effective on August 24, 2006. An editorial change does not affect the revision number.

**ATTACHMENT 1
RADIOACTIVE EFFLUENT RELEASE REPORT
BATCH RELEASES
JANUARY – DECEMBER 2006**

TABLE HP 10.5-1

GASEOUS	Units	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr
Number of Releases	N/A	10	12	3	5
Total Release Time	Minutes	1106	1370	333	311
Maximum Release Time	Minutes	164	165	135	153
Average Release Time	Minutes	110.6	114.2	111.0	62.0
Minimum Release Time	Minutes	58	65	70	3

LIQUID	Units	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr
Number of Releases	N/A	8	3	2	1
Total Release Time	Minutes	5307	1323	1685	2606
Maximum Release Time	Minutes	1556	763	886	2606
Average Release Time	Minutes	663.4	441	842.5	2606
Minimum Release Time	Minutes	485	36	799	2606

ATTACHMENT 2
RADIOACTIVE EFFLUENT RELEASE REPORT
GASEOUS EFFLUENTS – SUMMATION OF RELEASES
JANUARY – DECEMBER 2006

A. Fission and Activation Gases	Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Est Total Error %
1. Total Release	Ci	7.72E+00	1.11E+01	1.04E+01	9.87E+00	12.1
2. Average release rate for period	µCi/sec	9.93E-01	1.41E+00	1.31E+00	1.24E+00	
3. Percent of annual average EC**	%	4.01E-04	6.35E-04	5.61E-04	5.30E-04	

B. Iodines *						
1. Total Iodine	Ci	1.95E-04	5.77E-04	3.02E-04	1.54E-04	17.1
2. Average release rate for period	µCi/sec	2.51E-05	7.34E-05	3.80E-05	1.93E-05	
3. Percent of annual average EC**	%	1.11E-05	5.24E-05	2.22E-05	1.47E-05	

C. Particulates						
1. Total Release	Ci	1.12E-05	1.52E-05	1.15E-05	1.43E-05	22.8
2. Average release rate for period	µCi/sec	1.44E-06	1.93E-06	1.45E-06	1.80E-06	
3. Percent of annual average EC**	%	3.82E-05	2.79E-05	5.13E-05	6.38E-05	
4. Gross alpha radioactivity	Ci	7.65E-07	1.48E-06	2.55E-06	3.70E-06	

D. Tritium						
1. Total Release	Ci	2.53E+01	4.86E+01	2.09E+01	1.97E+01	
2. Average release rate for period	µCi/sec	3.25E+00	6.18E+00	2.63E+00	2.48E+00	
3. Percent of annual average EC**	%	6.92E-03	1.32E-02	5.59E-03	5.27E-03	

E. Whole Body Dose						
1. Beta airdose at site boundary due to noble gases (ODCM App A III.C)	mrads	6.35E-04	8.01E-04	7.37E-04	7.05E-04	
2. Percent of limit	%	6.35E-03	8.01E-03	7.37E-03	7.05E-03	
3. Gamma Airdose at Site boundary due to noble gasses (ODCM App A III.C)	mrads	1.51E-04	2.72E-04	2.48E-04	2.33E-04	
4. Percent of Limit	%	3.02E-03	5.44E-03	4.96E-03	4.66E-03	

F. Organ Dose						
1. Maximum organ dose to public based on critical receptors (ODCM App A III.D)	mrem	2.57E-02	5.00E-02	2.15E-02	2.01E-02	
2. Percent of Limit	%	3.42E-01	6.66E-01	2.87E-01	2.69E-01	

* Data are reported for I-131 and I-133 only.

** EC = Effluent Concentration

ATTACHMENT 2
RADIOACTIVE EFFLUENT RELEASE REPORT
GASEOUS EFFLUENTS
JANUARY – DECEMBER 2006

1. FISSION GASES	Units	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr
Ar-41	Ci	<LLD	<LLD	<LLD	<LLD
Kr-85	Ci	1.44E+00	1.35E-01	<LLD	1.09E-01
Kr-85m	Ci	<LLD	2.83E-04	5.10E-04	2.43E-04
Kr-87	Ci	<LLD	<LLD	6.43E-04	<LLD
Kr-88	Ci	<LLD	<LLD	<LLD	<LLD
Xe-131m	Ci	3.45E-02	1.32E-02	<LLD	5.42E-04
Xe-133	Ci	6.21E+00	1.08E+01	1.04E+01	9.75E+00
Xe-133m	Ci	2.97E-02	7.45E-04	<LLD	<LLD
Xe-135	Ci	1.71E-03	1.12E-01	3.15E-03	3.45E-03
Xe-135m	Ci	2.76E-03	2.13E-03	3.10E-03	3.36E-03
Xe-138	Ci	<LLD	<LLD	<LLD	<LLD
Total for Period	Ci	7.72E+00	1.11E+01	1.04E+01	9.87E+00

2. IODINES	Units	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr
I-131	Ci	5.22E-05	3.40E-04	1.32E-04	9.92E-05
I-132	Ci	<LLD	4.60E-03	<LLD	<LLD
I-133	Ci	1.43E-04	2.37E-04	1.70E-04	5.43E-05
I-134	Ci	<LLD	<LLD	<LLD	<LLD
I-135	Ci	<LLD	<LLD	<LLD	<LLD
Total for Period	Ci	1.95E-04	5.18E-03	3.02E-04	1.54E-04

**ATTACHMENT 2
RADIOACTIVE EFFLUENT RELEASE REPORT
GASEOUS EFFLUENTS
JANUARY – DECEMBER 2006**

3. PARTICULATES*	Units	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr
Mn-54	Ci	<LLD	<LLD	<LLD	<LLD
Co-58	Ci	<LLD	6.53E-06	<LLD	<LLD
Fe-59	Ci	<LLD	<LLD	<LLD	<LLD
Co-60	Ci	2.46E-06	2.89E-06	<LLD	<LLD
Zn-65	Ci	<LLD	<LLD	<LLD	<LLD
Sr-89	Ci	<LLD	<LLD	<LLD	<LLD
Sr-90	Ci	<LLD	<LLD	<LLD	<LLD
Cs-134	Ci	<LLD	<LLD	<LLD	<LLD
Cs-137	Ci	7.05E-07	<LLD	<LLD	<LLD
Ce-141	Ci	<LLD	<LLD	<LLD	<LLD
Ce-144	Ci	<LLD	<LLD	<LLD	<LLD
Net unidentified beta	Ci	8.05E-06	5.79E-06	1.15E-05	1.43E-05
Total	Ci	1.12E-05	1.52E-05	1.15E-05	1.43E-05

* Particulates with half-lives > 8 days

Note: All gaseous releases from PNP are considered to be ground-level releases.

ATTACHMENT 3
RADIOACTIVE EFFLUENT RELEASE REPORT
LIQUID EFFLUENTS – SUMMATION OF RELEASES
JANUARY – DECEMBER 2006

A. Fission and Activation Products	Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Est Total Error %
1. Total Release (not including tritium, gasses and alpha)	Ci	1.08E-01	4.33E-02	6.72E-02	9.29E-03	8.9
2. Average release rate for period	µCi/ml	2.76E-09	1.74E-09	1.74E-09	3.05E-10	
3. Percent of EC	%	2.32E-02	6.04E-02	3.65E-02	3.82E-02	

B. Tritium						
1. Total release	Ci	6.63E+02	6.40E+01	6.78E+01	4.31E+01	4.0
2. Average diluted concentration during period	µCi/ml	1.69E-05	2.58E-06	1.76E-06	1.41E-06	
3. Percent of EC	%	1.69E+00	2.58E-01	1.76E-01	1.41E-01	

C. Dissolved and Entrained Gasses						
1. Total release	Ci	1.87E-03	0.00E+00	0.00E+00	0.00E+00	18.8
2. Average diluted concentration during period	µCi/ml	4.77E-11	0.00E+00	0.00E+00	0.00E+00	
3. Percent of EC	%	2.38E-05	0.00E+00	0.00E+00	0.00E+00	

D. Gross Alpha Radioactivity (Total Release)	Ci	1.24E-05	3.01E-05	1.46E-05	0.00E+00
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E. Volume of Waste Released (prior to dilution)	liters	1.42E+06	3.49E+05	2.75E+05	1.59E+05
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F. Volume of dilution water used during period	liters	3.92E+10	2.49E+10	3.86E+10	3.05E+10
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G. Maximum Dose Commitment - Whole Body	mrem	8.41E-03	6.33E-03	1.09E-02	7.68E-04
Percent of ODCM App A III.H limit	%	5.61E-01	4.22E-01	7.27E-01	5.12E-02

H. Maximum Dose Commitment - Organ	mrem	9.42E-03	9.56E-03	1.36E-02	1.01E-03
Percent of ODCM App A III.H limit	%	1.88E-01	1.91E-01	2.72E-01	2.02E-02

*EC = Effluent Concentration

ATTACHMENT 3
RADIOACTIVE EFFLUENT RELEASE REPORT
LIQUID EFFLUENTS
JANUARY – DECEMBER 2006

NUCLIDES RELEASED	Units	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr
Cr-51	Ci	2.66E-03	<LLD	<LLD	<LLD
Mn-54	Ci	2.18E-03	6.04E-03	2.09E-02	1.72E-03
Co-57	Ci	1.25E-04	3.47E-06	6.93E-05	<LLD
Co-58	Ci	2.39E-02	2.13E-02	1.86E-02	7.68E-04
Fe-59	Ci	<LLD	<LLD	<LLD	<LLD
Co-60	Ci	1.20E-02	4.28E-03	2.11E-02	9.52E-04
Zn-65	Ci	<LLD	3.98E-04	1.14E-03	1.41E-04
Sr-89	Ci	3.00E-04	1.33E-03	3.44E-04	4.47E-05
Sr-90	Ci	1.21E-04	7.02E-04	7.02E-04	6.07E-05
Mo-99	Ci	<LLD	<LLD	<LLD	<LLD
Sb-125	Ci	6.60E-02	3.17E-03	1.56E-03	<LLD
Cs-134	Ci	<LLD	3.49E-04	3.53E-04	<LLD
Cs-137	Ci	8.18E-04	1.31E-03	1.52E-03	1.28E-04
Ce-141	Ci	<LLD	<LLD	<LLD	<LLD
Ce-144	Ci	<LLD	<LLD	<LLD	<LLD
Net unidentified beta	Ci	2.57E-04	4.43E-03	8.93E-04	5.48E-03
Fission & Activation Product Total	Ci	1.08E-01	4.33E-02	6.72E-02	9.29E-03
Xe-133		1.87E-03	<LLD	<LLD	<LLD
Dissolved/Entrained Total		1.87E-03	<LLD	<LLD	<LLD

ATTACHMENT 4
RADIOACTIVE EFFLUENT RELEASE REPORT
SOLID WASTE
JANUARY – DECEMBER 2006

Waste Class	Source of Waste	Solidification Agent	Container Type	*Volume (m ³)	**Total Curies	Principal Radionuclides
AU	DAW	N/A	General Design	636.7	4.81E+00	Cm-243, Co-60, Pu-238, Am-241, Pu-239, Mn-54, Cm-242, Ni-63, Fe-55, H-3, Sb-125, Ag-110m, C-14, Zn-65, Co-58, Cs-137, Sr-90, Nb-95, Tc-99, I-129
AU	Secondary system resin	N/A	General Design	28.9	7.90E-04	Cs-137, Cs-134, H-3, Sr-90, Mn-54
AS	Evaporator bottoms	Wax Winder	General Design	1.05	1.63E+00	Co-60, Co-58, Mn-54, Ru-106, Sb-125, Ag-110m, Ni-63, Cm-243, Cs-137, Ce-144, C-14, Fe-55, Zr-95, H-3, Zn-65, Pu-238, Pu-241, Sn-113, Am-241, Cs-134, Pu-239, Sr-90, Co-57, Cm-242, Tc-99, I-129
AU	Advanced Liquid Processing System (ALPS) Media	N/A	General Design	3.03	2.43E+00	Co-60, Pu-241, Cs-137, Ag-110m, Zn-65, Nb-95, H-3, Tc-99, Ni-59, Co-58, Sb-125, Pu-238, Ni-63, Pu-239, C-14, Co-57, Fe-55, I-129, Cm-243, Am-241, Mn-54, Cs-134, Sr-90, Cm-242, Zr-95, Cr-51

Waste Class	Source of Waste	Solidification Agent	Container Type	*Volume (m ³)	**Total Curies	Principal Radionuclides
C	Filters	N/A	General Design	1.59	5.42E+00	Co-60, Fe-55, C-14, Pu-238, Pu-239, Cm-242, Cm-243, Am-241, Ni-63, Ag-110m, Ce-144, Co-57, Co-58, Cs-137, H-3, I-129, Mn-54, Pu-241, Ru-106, Sb-125, Sn-113, Sr-90, Tc-99, Zn-65
			TOTAL	674.4	167.3	

*All shipments went to waste processors and not direct to disposal. The volume presented indicates shipment volume.

**Gamma isotopes are measured quantities, all other isotopes are estimated.

ATTACHMENT 5
RADIOACTIVE EFFLUENT RELEASE REPORT
LOWER LIMITS OF DETECTION FOR PALISADES EFFLUENTS
JANUARY – DECEMBER 2006

Gaseous Release Type	Type of Activity Analysis	Lower Limit of Detection (μCi/ml)
Waste Gas Storage Tank	Principal Gamma Emitters	1E-04
Containment Purge	Principal Gamma Emitters	1E-04
Stack Gas Effluent	I-131, I133	1E-12
	Principal Gamma Emitters (I-131, Others)	1E-11
	Sr-89, Sr-90, and Gross Alpha	1E-11
	Noble Gases Gross Beta or Gamma	1E-06

Liquid Release Type	Type of Activity Analysis	Lower Limit of Detection (μCi/ml)
Batch Waste Release Tanks	Principal Gamma Emitters	5E-07
	I-131	1E-06
	Dissolved and Entrained Gases (Gamma Emitters)	1E-05
	H-3	1E-05
	Gross Alpha	1E-07
	Sr-89, Sr-90	5E-08
Continuous Releases	Principal Gamma Emitters	5E-07
	I-131	1E-06
	Dissolved and Entrained Gases (Gamma Emitters)	1E-05
	H-3	1E-05
	Gross Alpha	1E-07
	Sr-89, Sr-90	5E-08

ATTACHMENT 6

**RADIOACTIVE EFFLUENT RELEASE REPORT
RESULTS OF 2006 RADIOCHEMISTRY CROSS CHECK PROGRAM**

**NOTE: CROSS CHECKS ARE NOT TYPICALLY PERFORMED IN THE FIRST
QUARTER OF THE YEAR**



Eckert & Ziegler

Analytics

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318 • U.S.A.

Tel 404•352•8677

Fax 404•352•2837

RESULTS OF RADIOCHEMISTRY

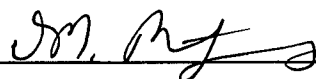
CROSS CHECK PROGRAM

NUCLEAR MANAGEMENT CO., LLC

PALISADES NUCLEAR PLANT

2nd QUARTER 2006

(Ref. Date 05/12/2006)

 3-23-07

Daniel M. Montgomery, QA Manager

SAMPLE	ANALYSIS	PALISADES VALUE microCi/cc	ANALYTICS VALUE microCi/cc	RATIO PALISADES: ANALYTICS	RESOLUTION	COMPARISON
*****:						
A20269-66	Ce-141	4.97E-05	4.99E-05	1.00	20	AGREEMENT
SOLID	Cr-51	8.15E-05	7.77E-05	1.05	20	AGREEMENT
DET. 1	Cs-134	1.92E-05	1.98E-05	0.97	20	AGREEMENT
	Cs-137	1.89E-05	1.79E-05	1.05	20	AGREEMENT
	Co-58	1.95E-05	1.99E-05	0.98	20	AGREEMENT
	Mn-54	2.46E-05	2.37E-05	1.04	20	AGREEMENT
	Fe-59	2.23E-05	2.17E-05	1.03	20	AGREEMENT
	Zn-65	2.98E-05	3.05E-05	0.98	20	AGREEMENT
	Co-60	1.97E-05	2.00E-05	0.98	20	AGREEMENT
*****:						
A20269-66	Ce-141	4.87E-05	4.99E-05	0.98	20	AGREEMENT
SOLID	Cr-51	7.62E-05	7.77E-05	0.98	20	AGREEMENT
DET. 2	Cs-134	1.91E-05	1.98E-05	0.96	20	AGREEMENT
	Cs-137	1.95E-05	1.79E-05	1.08	20	AGREEMENT
	Co-58	1.98E-05	1.99E-05	1.00	20	AGREEMENT
	Mn-54	2.44E-05	2.37E-05	1.03	20	AGREEMENT
	Fe-59	2.18E-05	2.17E-05	1.00	20	AGREEMENT
	Zn-65	3.01E-05	3.05E-05	0.99	20	AGREEMENT
	Co-60	1.92E-05	2.00E-05	0.96	20	AGREEMENT
*****:						

SAMPLE	ANALYSIS	PALISADES VALUE microCi/cc	ANALYTICS VALUE microCi/cc	RATIO PALISADES: ANALYTICS	RESOLUTION	COMPARISON

A20269-66	Ce-141	5.08E-05	4.99E-05	1.02	20	AGREEMENT
SOLID	Cr-51	7.70E-05	7.77E-05	0.99	20	AGREEMENT
DET. 3	Cs-134	1.96E-05	1.98E-05	0.99	20	AGREEMENT
	Cs-137	1.91E-05	1.79E-05	1.06	20	AGREEMENT
	Co-58	2.09E-05	1.99E-05	1.05	20	AGREEMENT
	Mn-54	2.43E-05	2.37E-05	1.02	20	AGREEMENT
	Fe-59	2.32E-05	2.17E-05	1.07	20	AGREEMENT
	Zn-65	2.98E-05	3.05E-05	0.98	20	AGREEMENT
	Co-60	1.95E-05	2.00E-05	0.97	20	AGREEMENT

A20270-66	Ce-141	4.86E-05	5.02E-05	0.97	20	AGREEMENT
SIMULATED	Cr-51	7.63E-05	7.82E-05	0.98	20	AGREEMENT
DET. 1	Cs-134	1.89E-05	1.99E-05	0.95	20	AGREEMENT
	Cs-137	1.79E-05	1.80E-05	0.99	20	AGREEMENT
	Co-58	1.95E-05	2.00E-05	0.98	20	AGREEMENT
	Mn-54	2.40E-05	2.38E-05	1.01	20	AGREEMENT
	Fe-59	2.27E-05	2.19E-05	1.04	20	AGREEMENT
	Zn-65	3.08E-05	3.07E-05	1.00	20	AGREEMENT
	Co-60	1.93E-05	2.01E-05	0.96	20	AGREEMENT

SAMPLE	ANALYSIS	PALISADES VALUE microCi/cc	ANALYTICS VALUE microCi/cc	RATIO PALISADES: ANALYTICS	RESOLUTION	COMPARISON

A20270-66	Ce-141	4.75E-05	5.02E-05	0.95	20	AGREEMENT
SIMULATED	Cr-51	7.76E-05	7.82E-05	0.99	20	AGREEMENT
DET. 2	Cs-134	1.92E-05	1.99E-05	0.97	20	AGREEMENT
	Cs-137	1.88E-05	1.80E-05	1.04	20	AGREEMENT
	Co-58	2.07E-05	2.00E-05	1.03	20	AGREEMENT
	Mn-54	2.46E-05	2.38E-05	1.03	20	AGREEMENT
	Fe-59	2.19E-05	2.19E-05	1.00	20	AGREEMENT
	Zn-65	2.98E-05	3.07E-05	0.97	20	AGREEMENT
	Co-60	1.95E-05	2.01E-05	0.97	20	AGREEMENT

A20270-66	Ce-141	5.04E-05	5.02E-05	1.00	20	AGREEMENT
SIMULATED	Cr-51	7.91E-05	7.82E-05	1.01	20	AGREEMENT
DET. 3	Cs-134	1.91E-05	1.99E-05	0.96	20	AGREEMENT
	Cs-137	1.88E-05	1.80E-05	1.04	20	AGREEMENT
	Co-58	2.11E-05	2.00E-05	1.05	20	AGREEMENT
	Mn-54	2.42E-05	2.38E-05	1.01	20	AGREEMENT
	Fe-59	2.19E-05	2.19E-05	1.00	20	AGREEMENT
	Zn-65	3.00E-05	3.07E-05	0.98	20	AGREEMENT
	Co-60	2.01E-05	2.01E-05	1.00	20	AGREEMENT

SAMPLE	ANALYSIS	PALISADES VALUE microCi/cc	ANALYTICS VALUE microCi/cc	RATIO PALISADES: ANALYTICS	RESOLUTION	COMPARISON

A20271-66	Ce-141	3.70E-04	3.76E-04	0.98	20	AGREEMENT
SOLID	Cr-51	5.86E-04	5.87E-04	1.00	20	AGREEMENT
DET. 1	Cs-134	1.37E-04	1.49E-04	0.92	20	AGREEMENT
	Cs-137	1.43E-04	1.35E-04	1.06	20	AGREEMENT
	Co-58	1.51E-04	1.50E-04	1.00	20	AGREEMENT
	Mn-54	1.84E-04	1.79E-04	1.03	20	AGREEMENT
	Fe-59	1.67E-04	1.64E-04	1.02	20	AGREEMENT
	Zn-65	2.37E-04	2.30E-04	1.03	20	AGREEMENT
	Co-60	1.50E-04	1.51E-04	1.00	20	AGREEMENT

A20271-66	Ce-141	3.33E-04	3.76E-04	0.88	20	AGREEMENT
SOLID	Cr-51	5.48E-04	5.87E-04	0.93	20	AGREEMENT
DET. 2	Cs-134	1.28E-04	1.49E-04	0.86	20	AGREEMENT
	Cs-137	1.29E-04	1.35E-04	0.95	20	AGREEMENT
	Co-58	1.49E-04	1.50E-04	0.99	20	AGREEMENT
	Mn-54	1.75E-04	1.79E-04	0.98	20	AGREEMENT
	Fe-59	1.61E-04	1.64E-04	0.98	20	AGREEMENT
	Zn-65	2.22E-04	2.30E-04	0.96	20	AGREEMENT
	Co-60	1.36E-04	1.51E-04	0.90	20	AGREEMENT

SAMPLE	ANALYSIS	PALISADES	ANALYTICS	RATIO	RESOLUTION	COMPARISON
		VALUE microCi/cc	VALUE microCi/cc	PALISADES: ANALYTICS		
*****:						
A20271-66	Ce-141	3.72E-04	3.76E-04	0.99	20	AGREEMENT
SOLID	Cr-51	6.12E-04	5.87E-04	1.04	20	AGREEMENT
DET. 3	Cs-134	1.43E-04	1.49E-04	0.96	20	AGREEMENT
	Cs-137	1.48E-04	1.35E-04	1.09	20	AGREEMENT
	Co-58	1.57E-04	1.50E-04	1.04	20	AGREEMENT
	Mn-54	1.89E-04	1.79E-04	1.06	20	AGREEMENT
	Fe-59	1.83E-04	1.64E-04	1.11	20	AGREEMENT
	Zn-65	2.48E-04	2.30E-04	1.08	20	AGREEMENT
	Co-60	1.52E-04	1.51E-04	1.01	20	AGREEMENT
*****:						
A20272-66	Ce-141	4.84E-02	4.85E-02	1.00	20	AGREEMENT
FILTER	Cr-51	7.50E-02	7.56E-02	0.99	20	AGREEMENT
DET. 1	Cs-134	1.78E-02	1.92E-02	0.93	20	AGREEMENT
	Cs-137	1.86E-02	1.74E-02	1.07	20	AGREEMENT
	Co-58	2.01E-02	1.94E-02	1.04	20	AGREEMENT
	Mn-54	2.48E-02	2.30E-02	1.08	20	AGREEMENT
	Fe-59	2.33E-02	2.11E-02	1.10	20	AGREEMENT
	Zn-65	3.17E-02	2.97E-02	1.07	20	AGREEMENT
	Co-60	1.91E-02	1.95E-02	0.98	20	AGREEMENT
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SAMPLE	ANALYSIS	PALISADES VALUE microCi/cc	ANALYTICS VALUE microCi/cc	RATIO PALISADES: ANALYTICS	RESOLUTION	COMPARISON
*****:						
A20272-66	Ce-141	4.64E-02	4.85E-02	0.96	20	AGREEMENT
FILTER	Cr-51	7.38E-02	7.56E-02	0.98	20	AGREEMENT
DET. 2	Cs-134	1.73E-02	1.92E-02	0.90	20	AGREEMENT
	Cs-137	1.90E-02	1.74E-02	1.09	20	AGREEMENT
	Co-58	2.03E-02	1.94E-02	1.05	20	AGREEMENT
	Mn-54	2.51E-02	2.30E-02	1.09	20	AGREEMENT
	Fe-59	2.26E-02	2.11E-02	1.07	20	AGREEMENT
	Zn-65	3.18E-02	2.97E-02	1.07	20	AGREEMENT
	Co-60	1.86E-02	1.95E-02	0.95	20	AGREEMENT
*****:						
A20272-66	Ce-141	5.22E-02	4.85E-02	1.08	20	AGREEMENT
FILTER	Cr-51	8.11E-02	7.56E-02	1.07	20	AGREEMENT
DET. 3	Cs-134	1.95E-02	1.92E-02	1.01	20	AGREEMENT
	Cs-137	2.01E-02	1.74E-02	1.15	20	AGREEMENT
	Co-58	2.19E-02	1.94E-02	1.13	20	AGREEMENT
	Mn-54	2.70E-02	2.30E-02	1.17	20	AGREEMENT
	Fe-59	2.46E-02	2.11E-02	1.16	20	AGREEMENT
	Zn-65	3.45E-02	2.97E-02	1.16	20	AGREEMENT
	Co-60	2.10E-02	1.95E-02	1.08	20	AGREEMENT
*****:						



ANALYTICS

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318 · U.S.A.

Phone (404) 352-8677
Fax (404) 352-2837

RESULTS OF RADIOCHEMISTRY

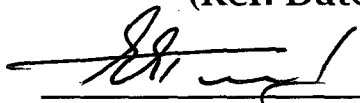
CROSS CHECK PROGRAM

NUCLEAR MANAGEMENT CO.

PALISADES NUCLEAR PLANT

3rd QUARTER 2006

(Ref. Date 08/18/2006)

 01-23-2007

Evgeny A. Taskaev, QA Manager, Alternate

SAMPLE	ANALYSIS	PALISADES VALUE microCi	ANALYTICS VALUE microCi	RATIO PALISADES: ANALYTICS	RESOLUTION	COMPARISON

A20745-66	Ce-141	2.99E-02	2.98E-02	1.00	20	AGREEMENT
CARTRIDGE	Cr-51	1.08E-01	1.08E-01	1.00	20	AGREEMENT
SAIC	Cs-134	1.62E-02	1.70E-02	0.95	20	AGREEMENT
BG-300	Cs-137	3.61E-02	3.43E-02	1.05	20	AGREEMENT
VOL.	Co-58	2.89E-02	2.78E-02	1.04	20	AGREEMENT
1 cc	Mn-54	2.53E-02	2.33E-02	1.08	20	AGREEMENT
DET. 1	Fe-59	1.39E-02	1.30E-02	1.07	20	AGREEMENT
	Zn-65	3.27E-02	3.05E-02	1.07	20	AGREEMENT
	Co-60	2.63E-02	2.63E-02	1.00	20	AGREEMENT

A20745-66	Ce-141	2.95E-02	2.98E-02	0.99	20	AGREEMENT
CARTRIDGE	Cr-51	1.07E-01	1.08E-01	0.99	20	AGREEMENT
SAIC	Cs-134	1.60E-02	1.70E-02	0.94	20	AGREEMENT
BG-300	Cs-137	3.73E-02	3.43E-02	1.09	20	AGREEMENT
VOL.	Co-58	2.92E-02	2.78E-02	1.05	20	AGREEMENT
1 cc	Mn-54	2.58E-02	2.33E-02	1.11	20	AGREEMENT
DET. 2	Fe-59	1.40E-02	1.30E-02	1.08	20	AGREEMENT
	Zn-65	3.33E-02	3.05E-02	1.09	20	AGREEMENT
	Co-60	2.58E-02	2.63E-02	0.98	20	AGREEMENT

A20745-66	Ce-141	2.78E-02	2.98E-02	0.93	20	AGREEMENT
CARTRIDGE	Cr-51	1.03E-01	1.08E-01	0.95	20	AGREEMENT
SAIC	Cs-134	1.55E-02	1.70E-02	0.91	20	AGREEMENT
BG-300	Cs-137	3.40E-02	3.43E-02	0.99	20	AGREEMENT
VOL.	Co-58	2.73E-02	2.78E-02	0.98	20	AGREEMENT
1 cc	Mn-54	2.42E-02	2.33E-02	1.04	20	AGREEMENT
DET. 3	Fe-59	1.36E-02	1.30E-02	1.05	20	AGREEMENT
	Zn-65	3.07E-02	3.05E-02	1.01	20	AGREEMENT
	Co-60	2.47E-02	2.63E-02	0.94	20	AGREEMENT

SAMPLE	ANALYSIS	PALISADES VALUE microCi/cc	ANALYTICS VALUE microCi/cc	RATIO PALISADES: ANALYTICS	RESOLUTION	COMPARISON

A20746A-66	Ce-141	5.80E-04	5.71E-04	1.02	20	AGREEMENT
SIMULATED	Cr-51	2.12E-03	2.07E-03	1.03	20	AGREEMENT
GAS	Cs-134	3.15E-04	3.26E-04	0.97	20	AGREEMENT
VOL.	Cs-137	6.96E-04	6.55E-04	1.06	20	AGREEMENT
25 cc	Co-58	5.62E-04	5.32E-04	1.06	20	AGREEMENT
DET. 1	Mn-54	4.92E-04	4.46E-04	1.10	20	AGREEMENT
	Fe-59	2.75E-04	2.48E-04	1.11	20	AGREEMENT
	Zn-65	6.21E-04	5.84E-04	1.06	20	AGREEMENT
	Co-60	5.09E-04	5.03E-04	1.01	20	AGREEMENT

A20746A-66	Ce-141	5.53E-04	5.71E-04	0.97	20	AGREEMENT
SIMULATED	Cr-51	2.15E-03	2.07E-03	1.04	20	AGREEMENT
GAS	Cs-134	3.11E-04	3.26E-04	0.96	20	AGREEMENT
VOL.	Cs-137	7.15E-04	6.55E-04	1.09	20	AGREEMENT
25 cc	Co-58	5.46E-04	5.32E-04	1.03	20	AGREEMENT
DET. 2	Mn-54	4.96E-04	4.46E-04	1.11	20	AGREEMENT
	Fe-59	2.60E-04	2.48E-04	1.05	20	AGREEMENT
	Zn-65	6.14E-04	5.84E-04	1.05	20	AGREEMENT
	Co-60	4.94E-04	5.03E-04	0.98	20	AGREEMENT

A20746A-66	Ce-141	5.39E-04	5.71E-04	0.94	20	AGREEMENT
SIMULATED	Cr-51	1.94E-03	2.07E-03	0.94	20	AGREEMENT
GAS	Cs-134	2.97E-04	3.26E-04	0.91	20	AGREEMENT
VOL.	Cs-137	6.53E-04	6.55E-04	1.00	20	AGREEMENT
25 cc	Co-58	5.32E-04	5.32E-04	1.00	20	AGREEMENT
DET. 3	Mn-54	4.57E-04	4.46E-04	1.02	20	AGREEMENT
	Fe-59	2.47E-04	2.48E-04	0.99	20	AGREEMENT
	Zn-65	5.80E-04	5.84E-04	0.99	20	AGREEMENT
	Co-60	4.80E-04	5.03E-04	0.95	20	AGREEMENT

SAMPLE	ANALYSIS	PALISADES VALUE microCi/cc	ANALYTICS VALUE microCi/cc	RATIO PALISADES: ANALYTICS	RESOLUTION	COMPARISON

A20747-66	Ce-141	2.69E-05	2.79E-05	0.97	20	AGREEMENT
SAND	Cr-51	1.06E-04	1.01E-04	1.05	20	AGREEMENT
1 LITER	Cs-134	1.53E-05	1.59E-05	0.96	20	AGREEMENT
DET. 1	Cs-137	3.33E-05	3.20E-05	1.04	20	AGREEMENT
	Co-58	2.65E-05	2.60E-05	1.02	20	AGREEMENT
	Mn-54	2.28E-05	2.18E-05	1.05	20	AGREEMENT
	Fe-59	1.34E-05	1.21E-05	1.11	20	AGREEMENT
	Zn-65	2.84E-05	2.85E-05	1.00	20	AGREEMENT
	Co-60	2.48E-05	2.46E-05	1.01	20	AGREEMENT

A20747-66	Ce-141	2.67E-05	2.79E-05	0.96	20	AGREEMENT
SAND	Cr-51	9.80E-05	1.01E-04	0.97	20	AGREEMENT
1 LITER	Cs-134	1.56E-05	1.59E-05	0.98	20	AGREEMENT
DET. 2	Cs-137	3.31E-05	3.20E-05	1.04	20	AGREEMENT
	Co-58	2.67E-05	2.60E-05	1.03	20	AGREEMENT
	Mn-54	2.26E-05	2.18E-05	1.04	20	AGREEMENT
	Fe-59	1.24E-05	1.21E-05	1.02	20	AGREEMENT
	Zn-65	2.78E-05	2.85E-05	0.98	20	AGREEMENT
	Co-60	2.39E-05	2.46E-05	0.97	20	AGREEMENT

A20747-66	Ce-141	2.71E-05	2.79E-05	0.97	20	AGREEMENT
SAND	Cr-51	1.01E-04	1.01E-04	1.00	20	AGREEMENT
1 LITER	Cs-134	1.56E-05	1.59E-05	0.98	20	AGREEMENT
DET. 3	Cs-137	3.21E-05	3.20E-05	1.00	20	AGREEMENT
	Co-58	2.59E-05	2.60E-05	1.00	20	AGREEMENT
	Mn-54	2.19E-05	2.18E-05	1.01	20	AGREEMENT
	Fe-59	1.19E-05	1.21E-05	0.98	20	AGREEMENT
	Zn-65	2.88E-05	2.85E-05	1.01	20	AGREEMENT
	Co-60	2.37E-05	2.46E-05	0.96	20	AGREEMENT

SAMPLE	ANALYSIS	PALISADES VALUE microCi	ANALYTICS VALUE microCi	RATIO PALISADES: ANALYTICS	RESOLUTION	COMPARISON

A20748-66	Ce-141	3.01E-02	2.86E-02	1.05	20	AGREEMENT
CARTRIDGE	Cr-51	1.09E-01	1.04E-01	1.05	20	AGREEMENT
LAPEL	Cs-134	1.59E-02	1.63E-02	0.97	20	AGREEMENT
DE-500	Cs-137	3.58E-02	3.29E-02	1.09	20	AGREEMENT
VOL.	Co-58	2.86E-02	2.67E-02	1.07	20	AGREEMENT
1 cc	Mn-54	2.54E-02	2.24E-02	1.13	20	AGREEMENT
DET. 1	Fe-59	1.38E-02	1.25E-02	1.11	20	AGREEMENT
	Zn-65	3.23E-02	2.93E-02	1.10	20	AGREEMENT
	Co-60	2.60E-02	2.53E-02	1.03	20	AGREEMENT

A20748-66	Ce-141	2.83E-02	2.86E-02	0.99	20	AGREEMENT
CARTRIDGE	Cr-51	1.03E-01	1.04E-01	0.99	20	AGREEMENT
LAPEL	Cs-134	1.55E-02	1.63E-02	0.95	20	AGREEMENT
DE-500	Cs-137	3.65E-02	3.29E-02	1.11	20	AGREEMENT
VOL.	Co-58	2.85E-02	2.67E-02	1.07	20	AGREEMENT
1 cc	Mn-54	2.52E-02	2.24E-02	1.13	20	AGREEMENT
DET. 2	Fe-59	1.36E-02	1.25E-02	1.09	20	AGREEMENT
	Zn-65	3.22E-02	2.93E-02	1.10	20	AGREEMENT
	Co-60	2.48E-02	2.53E-02	0.98	20	AGREEMENT

A20748-66	Ce-141	2.63E-02	2.86E-02	0.92	20	AGREEMENT
CARTRIDGE	Cr-51	9.44E-02	1.04E-01	0.91	20	AGREEMENT
LAPEL	Cs-134	1.45E-02	1.63E-02	0.89	20	AGREEMENT
DE-500	Cs-137	3.18E-02	3.29E-02	0.97	20	AGREEMENT
VOL.	Co-58	2.60E-02	2.67E-02	0.97	20	AGREEMENT
1 cc	Mn-54	2.27E-02	2.24E-02	1.01	20	AGREEMENT
DET. 3	Fe-59	1.28E-02	1.25E-02	1.03	20	AGREEMENT
	Zn-65	2.93E-02	2.93E-02	1.00	20	AGREEMENT
	Co-60	2.35E-02	2.53E-02	0.93	20	AGREEMENT

ANALYTICS

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318 · U.S.A.

Phone (404) 352-8677
Fax (404) 352-2837



RESULTS OF RADIOCHEMISTRY

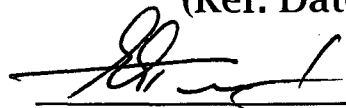
CROSS CHECK PROGRAM

NUCLEAR MANAGEMENT CO.

PALISADES NUCLEAR PLANT

4th QUARTER 2006

(Ref. Date 11/10/2006)

 01-23-2007

Evgeny A. Taskaev, QA Manager, Alternate

SAMPLE	ANALYSIS	PALISADES	ANALYTICS	RATIO	RESOLUTION	COMPARISON
		VALUE	VALUE	PALISADES:		
		microCi/cc	microCi/cc	ANALYTICS		

A20988-66	Ce-141	2.24E-03	2.40E-03	0.93	20	AGREEMENT
SOLID	Cr-51	4.42E-03	3.91E-03	1.13	20	AGREEMENT
7.2 mL	Cs-134	7.31E-04	6.93E-04	1.06	20	AGREEMENT
Bomb	Cs-137	1.19E-03	1.09E-03	1.09	20	AGREEMENT
DET. 1	Co-58	5.18E-04	5.01E-04	1.03	20	AGREEMENT
	Mn-54	5.90E-04	5.40E-04	1.09	20	AGREEMENT
	Fe-59	5.68E-04	5.57E-04	1.02	20	AGREEMENT
	Zn-65	8.57E-04	8.12E-04	1.06	20	AGREEMENT
	Co-60	1.29E-03	1.30E-03	0.99	20	AGREEMENT

A20988-66	Ce-141	2.20E-03	2.40E-03	0.92	20	AGREEMENT
SOLID	Cr-51	3.81E-03	3.91E-03	0.97	20	AGREEMENT
7.2 mL	Cs-134	7.66E-04	6.93E-04	1.11	20	AGREEMENT
Bomb	Cs-137	1.15E-03	1.09E-03	1.06	20	AGREEMENT
DET. 2	Co-58	5.37E-04	5.01E-04	1.07	20	AGREEMENT
	Mn-54	5.63E-04	5.40E-04	1.04	20	AGREEMENT
	Fe-59	5.94E-04	5.57E-04	1.07	20	AGREEMENT
	Zn-65	8.16E-04	8.12E-04	1.00	20	AGREEMENT
	Co-60	1.27E-03	1.30E-03	0.98	20	AGREEMENT

A20988-66	Ce-141	2.25E-03	2.40E-03	0.94	20	AGREEMENT
SOLID	Cr-51	3.65E-03	3.91E-03	0.93	20	AGREEMENT
7.2 mL	Cs-134	7.41E-04	6.93E-04	1.07	20	AGREEMENT
Bomb	Cs-137	1.14E-03	1.09E-03	1.05	20	AGREEMENT
DET. 3	Co-58	4.74E-04	5.01E-04	0.95	20	AGREEMENT
	Mn-54	5.87E-04	5.40E-04	1.09	20	AGREEMENT
	Fe-59	5.56E-04	5.57E-04	1.00	20	AGREEMENT
	Zn-65	9.36E-04	8.12E-04	1.15	20	AGREEMENT
	Co-60	1.25E-03	1.30E-03	0.96	20	AGREEMENT

SAMPLE	ANALYSIS	PALISADES VALUE microCi	ANALYTICS VALUE microCi	RATIO PALISADES: ANALYTICS	RESOLUTION	COMPARISON

A20987-66	Ce-141	1.07E-01	9.70E-02	1.10	20	AGREEMENT
CARTRIDGE	Cr-51	1.72E-01	1.58E-01	1.09	20	AGREEMENT
RGEM	Cs-134	2.86E-02	2.80E-02	1.02	20	AGREEMENT
DET. 1	Cs-137	5.21E-02	4.40E-02	1.18	20	AGREEMENT
	Co-58	2.29E-02	2.02E-02	1.13	20	AGREEMENT
	Mn-54	2.66E-02	2.18E-02	1.22	20	AGREEMENT
	Fe-59	2.67E-02	2.25E-02	1.19	20	AGREEMENT
	Zn-65	3.91E-02	3.28E-02	1.19	20	AGREEMENT
	Co-60	5.58E-02	5.25E-02	1.06	20	AGREEMENT

A20987-66	Ce-141	9.92E-02	9.70E-02	1.02	20	AGREEMENT
CARTRIDGE	Cr-51	1.66E-01	1.58E-01	1.05	20	AGREEMENT
RGEM	Cs-134	2.74E-02	2.80E-02	0.98	20	AGREEMENT
DET. 2	Cs-137	5.19E-02	4.40E-02	1.18	20	AGREEMENT
	Co-58	2.25E-02	2.02E-02	1.11	20	AGREEMENT
	Mn-54	2.63E-02	2.18E-02	1.21	20	AGREEMENT
	Fe-59	2.54E-02	2.25E-02	1.13	20	AGREEMENT
	Zn-65	3.86E-02	3.28E-02	1.18	20	AGREEMENT
	Co-60	5.31E-02	5.25E-02	1.01	20	AGREEMENT

A20987-66	Ce-141	8.98E-02	9.70E-02	0.93	20	AGREEMENT
CARTRIDGE	Cr-51	1.50E-01	1.58E-01	0.95	20	AGREEMENT
RGEM	Cs-134	2.55E-02	2.80E-02	0.91	20	AGREEMENT
DET. 3	Cs-137	4.62E-02	4.40E-02	1.05	20	AGREEMENT
	Co-58	2.01E-02	2.02E-02	0.99	20	AGREEMENT
	Mn-54	2.32E-02	2.18E-02	1.06	20	AGREEMENT
	Fe-59	2.31E-02	2.25E-02	1.03	20	AGREEMENT
	Zn-65	3.38E-02	3.28E-02	1.03	20	AGREEMENT
	Co-60	5.00E-02	5.25E-02	0.95	20	AGREEMENT

SAMPLE	ANALYSIS	PALISADES	ANALYTICS	RATIO	RESOLUTION	COMPARISON
		VALUE microCi/cc	VALUE microCi/cc	PALISADES: ANALYTICS		

A20990-66	Tritium	7.47E-04	7.61E-04	0.98	12.5	AGREEMENT
LIQUID	COUNT 1					

A20990-66	Tritium	7.53E-04	7.61E-04	0.99	12.5	AGREEMENT
LIQUID	COUNT 2					

A20990-66	Tritium	7.50E-04	7.61E-04	0.98	12.5	AGREEMENT
LIQUID						

ATTACHMENT 7

**RADIOACTIVE EFFLUENT RELEASE REPORT
OFFSITE DOSE CALCULATION MANUAL**

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