AREVA

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Document Control Desk
Director, Office of Nuclear Material
Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

License SNM-1227
Docket 70-1257

Subject: Required Reporting of Effluents per 10 CFR 70.59

As required by 10 CFR 70.59, AREVA NP Inc.(AREVA NP) is reporting discharges of radioactive materials in the effluents from its nuclear fuels fabrication plant on Horn Rapids Road in Richland, Washington. Data from July 1, 2011 through December 31, 2011 are reported in the attached tables.

If there are any questions, please contact me at (509) 375-8638.

Very truly yours,

RK Burklin

R. K. Burklin
Radiation Protection

/mah

Attachments

cc: V. McCree, U.S. Nuclear Regulatory Commission, Region II
P. J. Martell, State of Washington Department of Health
M. L. Thomas, U.S. Nuclear Regulatory Commission, Region II

NMSS01

AREVA NP INC.
2101 Horn Rapids Road, Richland, WA 99354
Tel.: 509 375 8100 www.areva.com

Gaseous Effluent July 1, 2011 – December 31, 2011				
Stack	**Average Concentration (μCi/ml)**	**Average LLD (μCi/ml)***	**Quantity (μCi α)****	**Flow (m^3)**
Low Enriched Uranium				
K03	6.70E-17	3.30E-15	.02	2.89E+08
K06	2.16E-17	3.40E-15	.00	9.84E+07
K21	3.03E-16	2.10E-14	.01	4.24E+07
K25	3.95E-16	3.68E-15	.01	2.60E+07
K31	9.94E-16	9.16E-15	.24	2.45E+08
K37	4.28E-15	3.72E-15	.39	9.06E+07
K42	4.28E-16	4.12E-15	.02	4.04E+07
K46	2.36E-17	4.04E-15	.00	1.16E+08
K47	3.69E-15	9.50E-15	.03	7.89E+06
K49	1.34E-15	2.93E-15	.09	6.59E+07
K50	8.80E-15	6.36E-15	.05	5.92E+06
K55	7.88E-16	5.03E-15	.01	8.17E+06
K56	6.83E-15	4.08E-15	.03	3.68E+06
K58	3.74E-16	2.46E-15	.05	1.22E+08
K60	1.91E-16	5.35E-15	.02	1.02E+08
K62	-1.08E-16	5.00E-15	-.04	3.83E+08
K65	1.02E-16	3.70E-15	.00	1.69E+07
K67	2.02E-15	4.60E-15	.01	6.61E+06
K72	1.25E-15	2.91E-15	.08	6.36E+07
TOTAL			**1.02**	**1.73E+09**
Total if negatives are dropped			**1.06**	

* Typical lower limit of detection for 7-day sampling.
** Based on low enriched uranium

July 1, 2011 – December 31, 2011				
Stack	**Average Concentration (μCi/ml)***	**Average LLD (μCi/ml)****	**Quantity (μCi)**	**Flow (m^3)**
Radionuclide: Rn-220				
K03	4.94E-09	---	1.43E+06	2.89E+08
K31	4.16E-09	---	1.02E+06	2.45E+08
K72	1.02E-07	---	6.47E+06	6.36E+07
TOTAL			**8.92E+06**	**5.98E+08**

* Radon concentrations are determined by e-perms, which rely on changes in voltage; not counting instruments

Liquid Effluent* July 1, 2011 – December 31, 2011				
Constituent	**Concentration (μCi/ml)**	**LLD (μCi/ml)**	**Quantity (Ci)**	**Liquid Volume (m^3)**
Soluble U	<3.75E-08	***	<0.0029	7.78E+04
Insoluble U**	≤3.00E-08	***	≤0.0023	
Tc-99	<2.58E-07	***	<0.02	
Total Ci			<0.0252	

* Combined liquid effluent released to City of Richland sewer system.

** For each calendar month the average concentration of insoluble uranium was less than 50 ppb.

*** These constituents are analyzed chemically via Inductively Coupled Plasma/Mass Spectroscopy (ICP/MS) as opposed to radiation counting. Laboratory detection limits for uranium and Tc-99 are generally 1 ppb and 5 ppt, respectively.