April 16, 2012

Mr. Steve Tarlton, Manager
Radiation Management Program
Hazardous Materials and Waste Management Division
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

Re: 2nd half 2011 Semiannual Performance Objective Report – Corrected Radon Section

Dear Mr. Tarlton,

Please find enclosed an update to the 2nd half 2011 Semiannual Performance Objective Report Radon Monitoring Section pages 42-48. Corrections to this section have been made. Please replace these pages in your copies.

If you have any questions, please do not hesitate to contact me at (719) 275-7413 ext. 212 or by email at jim.cain@cotterusa.com.

Sincerely,

Jim Cain
Environmental Coordinator/
Radiation Safety Officer

JC:lkb

Attachment

Radon

Radon concentrations for the three (3) most recent semiannual periods are shown in Table RN-1 and Figure RN-1 respectively. Table RN-2 and RN-3 display the 2011 quarterly results. Figures RN-2, RN-3 and RN-4 display the 1979 through 2011 annual average by location. As expected, 1979 through 2011 data demonstrate slightly elevated readings at boundary locations with readings in residential areas at background levels. Comparison to the CDPHE required equilibrium factors and effluent concentration limits per the CDPHE letter of June 24, 2004 is shown in Table RN-4. Background mean is calculated for the three (3) most recent semiannual periods in 2010 and 2011 as specified in CDPHE letter of June 24, 2004. The Background Mean plus two (2) standard deviations of the Background Mean is added to the Alternate Effluent Limit and compared to the semiannual average results.

All locations showed compliance at less than the Effective Effluent Limit (EEL) for the July to December 2011 reporting period. Second Half 2011 results are generally lower than the last semiannual period yet within historical levels. Note that this is an annual limit. First (1^{st}) quarter 2010 data was particularly unusual in that two (2) community locations and one (1) boundary monitor were reported at less than the detection limit. Several other boundary monitors had very low results compared to historical values and to nearby supplemental monitors. Three (3) separate QA assessments were performed by the vendor and the results were not changed. However, for all locations in the second (2^{nd}) quarter 2010, the data are similar. No reason is known for this difference between quarterly data. The 2010 Quality Control data showed exact correspondence. 2011 Quality Control data also show exact correspondence.

Due to concerns raised by CDPHE in early July 2009 when the Secondary Impoundment was allowed to dry in anticipation of starting the initial cover, five (5) additional radon monitors were deployed starting in August and co-located at AS-202, AS-203 and AS-204 as well as new monitors located between AS-202 and AS-203 as well as between AS-203 and AS-204. These results are reported in Table RN-3.

Radon Flux Measurements

Cotter submitted a letter to CDPHE on June 30, 2010, indicating that the Primary and Secondary Impoundments would be closed as soon as reasonably achievable. Subsequently Cotter notified EPA that Radon Flux measurements for the Primary Impoundment would no longer be done.

Table RN-1
Semiannual Average ^{222}Rn Concentration
(pCi/m^3)

Location	Jul. - Dec. 2010	Jan. - Jun. 2011	Jul. - Dec. 2011
AS-202 East Boundary	700	850	650
AS-203 South Boundary	850	750	650
AS-204 West Boundary	1100	650	800
AS-206 North Boundary	700	900	600
AS-209 Mill Entrance Road	1000	1250	700
AS-210 Shadow Hills Estates	650	950	600
AS-212 Nearest Resident	450	1050	450
Canon City #2	550	1050	550
Lincoln Park #2	700	1200	750
OroVerde #3	450	1000	400
Sec Imp	1350	1550	1450

Figure RN-1
Environmental Air
Semiannual Average ^{222}Rn Concentration

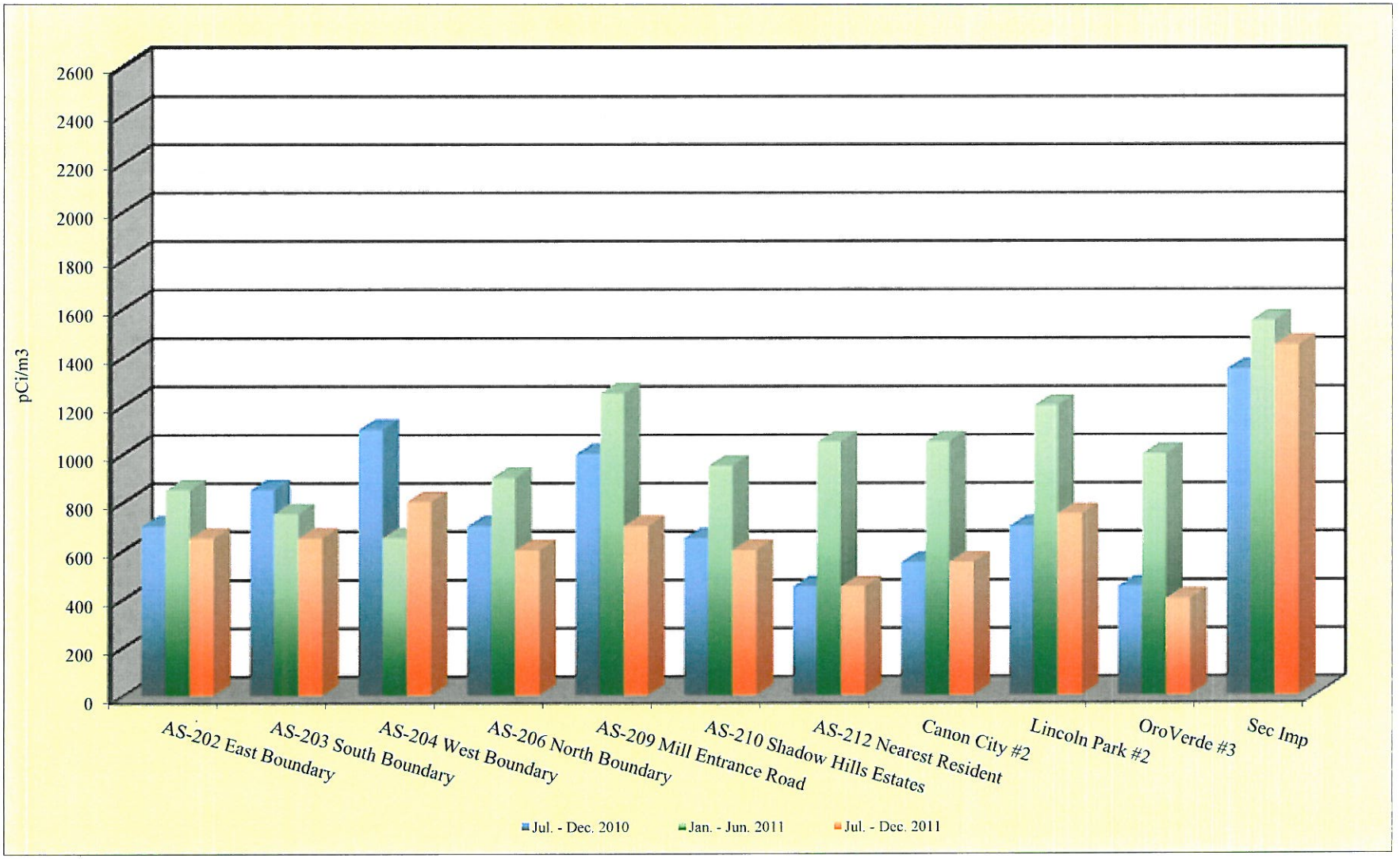

Table RN-2
Annual Average ^{222}Rn Concentration
(pCi/m^3)

	Location	1ST	2ND	3RD	4TH	AVG
2011	AS-202 East Boundary	1300	400	600	700	750
	AS-203 South Boundary	1000	500	700	600	700
	AS-204 West Boundary	900	400	800	800	725
	AS-206 North Boundary	1400	400	500	700	750
	AS-209 Mill Entrance Road	1500	1000	500	900	975
	AS-210 Shadow Hills Estates	900	1000	600	600	775
	AS-212 Nearest Resident	1000	1100	500	400	750
	Canon City #2	1100	1000	500	600	800
	Lincoln Park #2	1200	1200	600	900	975
	OroVerde #3	1000	1000	500	300	700
	Secondary Impoundment	1700	1400	1300	1600	1500
	QC	1400	400	500	600	

Note: Orange denotes QC location for the quarter

Table RN-3
Average ^{222}Rn Concentration Special Locations
(pCi/m^3)

	Location	1ST	2ND	3RD	4TH	AVG
2011	AS-202 East Boundary	800	500	600	600	625
	AS-203 South Boundary	800	500	900	600	700
	AS-204 West Boundary	900	600	700	700	725
	Fence South (N3823.453 W 105 14.097)	600	700	500	700	625
	Fence South (N38 23.428 W 105 13.932)	1000	800	700	600	775

Figure RN-2
Environmental Air
Average Annual ^{222}Rn Concentration

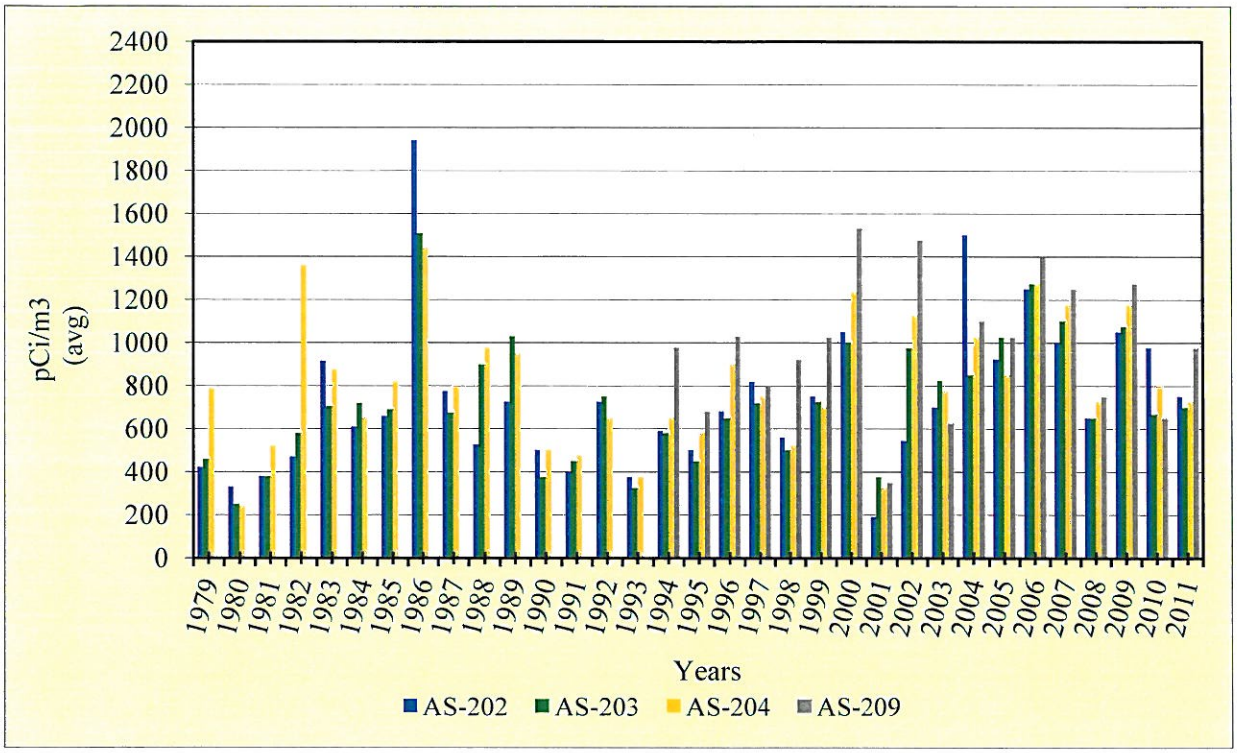

Figure RN-3
Environmental Air
Average Annual ^{222}Rn Concentration

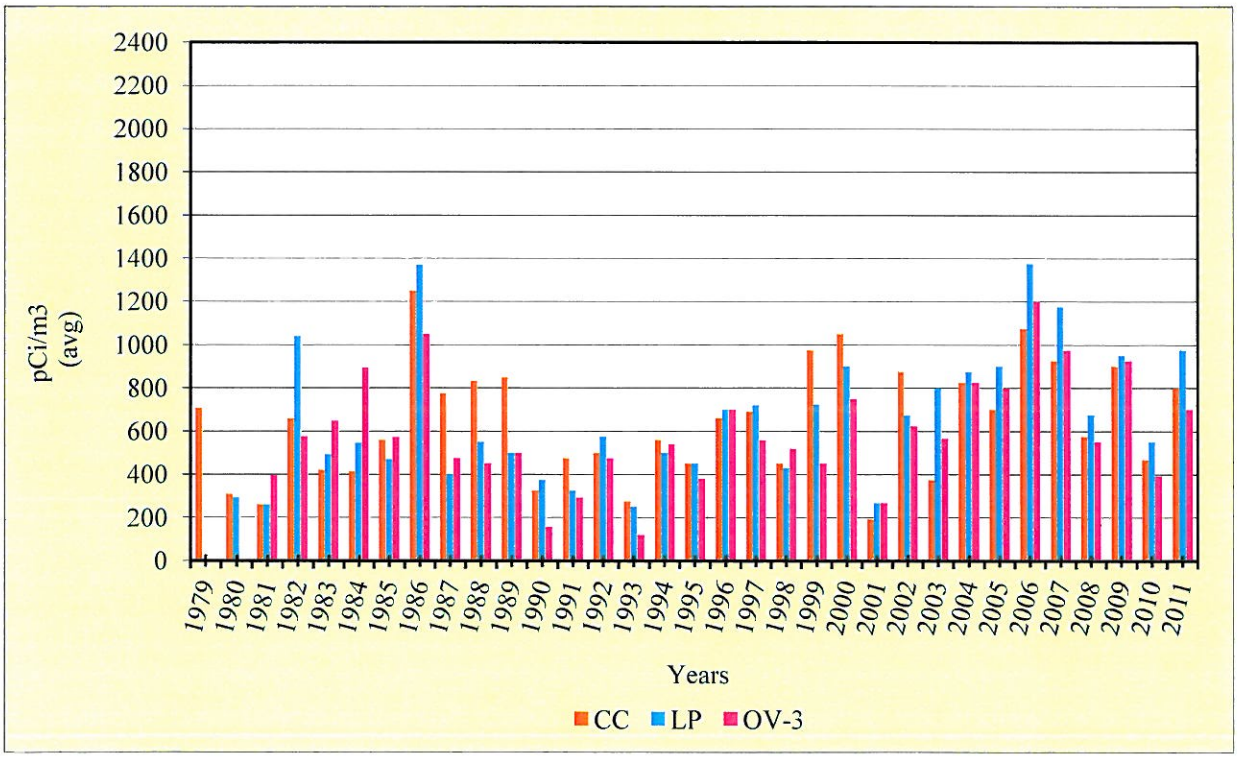

Figure RN-4
Environmental Air
Average Annual ^{222}Rn Concentration

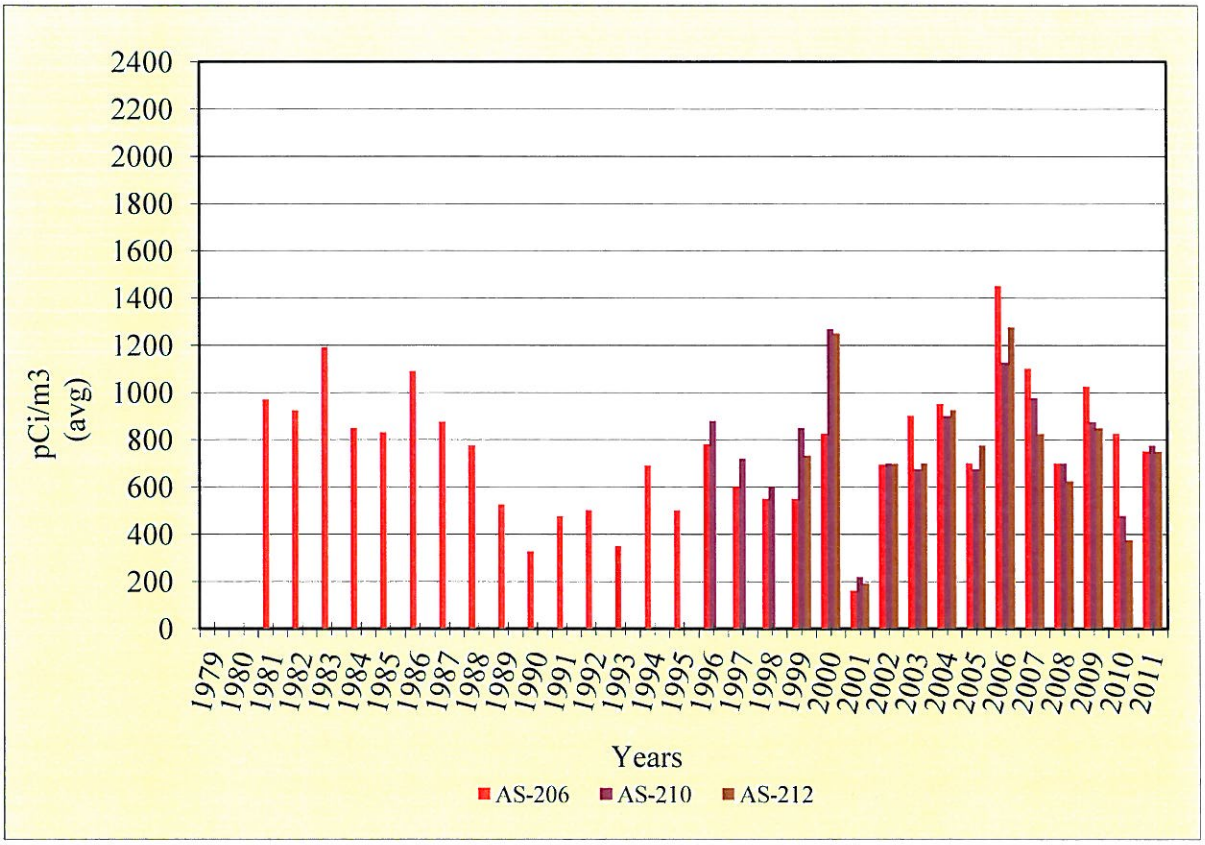

Table RN-4 Alternate Effluent Limit Comparison for ^{222}Rn

Background Concentrations (pCi/m^3)

Year	CC	LP	OV3	Background (BKG) MEAN	Standard Deviation of MEAN	BKG + 2 Standard Deviations of MEAN
2011 2nd half						
Q1						
Q2						
Q3	500	600	500			
Q4	600	900	300	567	57	680
2011 1st half						
Q1	1100	1200	1000			
Q2	1050	1200	1000			
Q3	N/A	N/A	N/A			
Q4	N/A	N/A	N/A	1092	27	1145
2010 2nd half						
Q1	N/A	N/A	N/A			
Q2	N/A	N/A	N/A			
Q3	600	600	400			
Q4	500	800	500	567	39	646

Year	Sampler Location	Assumed Equilibrium Fraction(pCi/m^3)	Alternate Effluent Limit (pCi/m^3)	Effective Effluent Limit = Alternate Effluent Limit + BKG + 2 Standard Deviations of MEAN (pCi/m^3)	Average Radon (including BKG) (pCi/m^3)	> Effluent Limit?
2011 2nd half	AS 202	0.2	500	1180	650	no
	AS 203	0.2	500	1180	650	no
	AS 204	0.2	500	1180	800	no
	AS 206	0.4	250	930	600	no
	AS 209	0.2	500	1180	700	no
	AS 210	0.4	250	930	600	no
	AS 212	0.4	250	930	450	no
2011 1st half	AS 202	0.2	500	1645	850	no
	AS 203	0.2	500	1645	750	no
	AS 204	0.2	500	1645	650	no
	AS 206	0.4	250	1395	900	no
	AS 209	0.2	500	1645	1250	no
	AS 210	0.4	250	1395	950	no
	AS 212	0.4	250	1395	1050	no
2010 2nd half	AS 202	0.2	500	1146	700	no
	AS 203	0.2	500	1146	850	no
	AS 204	0.2	500	1146	1100	no
	AS 206	0.4	250	896	700	no
	AS 209	0.2	500	1146	1000	no
	AS 210	0.4	250	896	650	no
	AS 212	0.4	250	896	450	no