

# CEM - 2009 (Quarterly)

British Columbia Hydro and Power Authority  
Permit: 0330 / Due Date: Jul 30 2009

01A - Power boiler #1	
<b>Nitrogen Oxides</b>	
Test Date Range:	April 1 - June 30
Total Hours of Data Collected:	0 hrs
Permitted Flow Limit:	7600 m3/min
Average Measured CEM Flow:	
Contaminant Permit Limit Value:	52 mg/m3
Minimum Hourly Average Test Result:	0 mg/m3
Date/Time of Minimum Hourly Average Test Result:	Jun 30 2009
Maximum Hourly Average Test Result:	0 mg/m3
Date/Time of Maximum Hourly Average Test Result:	Jun 30 2009
Average of Test Results Over the Quarter:	0 mg/m3
98th Percentile Value:	0 mg/m3
Data Recovery:	100 %
Comments:	Unit 1 did not operate during this quarter. A=1 hr data
01B - Power boiler #1	
<b>Nitrogen Oxides</b>	
Test Date Range:	April 1 - June 30
Total Hours of Data Collected:	0 hrs
Permitted Flow Limit:	7600 m3/min
Average Measured CEM Flow:	
Contaminant Permit Limit Value:	35 mg/m3
Minimum Hourly Average Test Result:	0 mg/m3
Date/Time of Minimum Hourly Average Test Result:	Jun 30 2009
Maximum Hourly Average Test Result:	0 mg/m3
Date/Time of Maximum Hourly Average Test Result:	Jun 30 2009
Average of Test Results Over the Quarter:	0 mg/m3
98th Percentile Value:	0 mg/m3
Data Recovery:	100 %
Comments:	Unit 1 did not run during this quarter. B=24 hr data
02A - Power boiler #2	
<b>Nitrogen Oxides</b>	
Test Date Range:	April 1 - June 30
Total Hours of Data Collected:	0 hrs
Permitted Flow Limit:	7600 m3/min
Average Measured CEM Flow:	
Contaminant Permit Limit Value:	52 mg/m3
Minimum Hourly Average Test Result:	0 mg/m3
Date/Time of Minimum Hourly Average Test Result:	Jun 30 2009
Maximum Hourly Average Test Result:	0 mg/m3
Date/Time of Maximum Hourly Average Test Result:	Jun 30 2009
Average of Test Results Over the Quarter:	0 mg/m3
98th Percentile Value:	0 mg/m3
Data Recovery:	100 %
Comments:	Unit 2 ran for standby purposes only during this quarter, did not generate > 45 MW. A=1 hr data
02B - Power boiler #2	
<b>Nitrogen Oxides</b>	
Test Date Range:	April 1 - June 30
Total Hours of Data Collected:	0 hrs
Permitted Flow Limit:	7600 m3/min
Average Measured CEM Flow:	
Contaminant Permit Limit Value:	35 mg/m3

Minimum Hourly Average Test Result:	0 mg/m3
Date/Time of Minimum Hourly Average Test Result:	Jun 30 2009
Maximum Hourly Average Test Result:	0 mg/m3
Date/Time of Maximum Hourly Average Test Result:	Jun 30 2009
Average of Test Results Over the Quarter:	0 mg/m3
98th Percentile Value:	0 mg/m3
Data Recovery:	100 %
Comments:	Unit 2 ran for standby purposes during this quarter, did not generate > 45MW. B=24 hr data

#### 03A - Power boiler #3

##### Nitrogen Oxides

Test Date Range:	April 1 - June 30
Total Hours of Data Collected:	49 hrs
Permitted Flow Limit:	7600 m3/min
Average Measured CEM Flow:	
Contaminant Permit Limit Value:	52 mg/m3
Minimum Hourly Average Test Result:	25.3 mg/m3
Date/Time of Minimum Hourly Average Test Result:	Apr 25 2009
Maximum Hourly Average Test Result:	136.4 mg/m3
Date/Time of Maximum Hourly Average Test Result:	Apr 24 2009
Average of Test Results Over the Quarter:	32.667 mg/m3
98th Percentile Value:	110.864 mg/m3
Data Recovery:	100 %
Out of Compliance Explanation of 98th Percentile:	as previously reported during the April 24th start up of unit 3 the ammonia block valve fuse failure delayed SCR operation for approximately 2 hours.
Plan of Action to Obtain Compliance of 98th Percentile:	Circuit upgrade completed to prevent premature fuse failure.
Comments:	A=1 hr data

#### 03B - Power boiler #3

##### Nitrogen Oxides

Test Date Range:	April 1 - June 30
Total Hours of Data Collected:	49 hrs
Permitted Flow Limit:	7600 m3/min
Average Measured CEM Flow:	
Contaminant Permit Limit Value:	35 mg/m3
Minimum Hourly Average Test Result:	22.004 mg/m3
Date/Time of Minimum Hourly Average Test Result:	Apr 24 2009
Maximum Hourly Average Test Result:	42.133 mg/m3
Date/Time of Maximum Hourly Average Test Result:	Apr 25 2009
Average of Test Results Over the Quarter:	32.617 mg/m3
98th Percentile Value:	42.133 mg/m3
Data Recovery:	100 %
Out of Compliance Explanation of 98th Percentile:	as previously reported during the April 24th start up the ammonia block valve fuse failure delayed SCR operation for approximately 2 hours resulting in slightly high 24 hr averages.
Plan of Action to Obtain Compliance of 98th Percentile:	Circuit upgrade completed to prevent premature fuse failure.
Comments:	B=24 hr data

#### 04A - Power boiler #4

##### Nitrogen Oxides

Test Date Range:	April 1 - June 30
Total Hours of Data Collected:	91 hrs
Permitted Flow Limit:	7600 m3/min
Average Measured CEM Flow:	

Contaminant Permit Limit Value:	52 mg/m3
Minimum Hourly Average Test Result:	11.2 mg/m3
Date/Time of Minimum Hourly Average Test Result:	Apr 26 2009
Maximum Hourly Average Test Result:	34.6 mg/m3
Date/Time of Maximum Hourly Average Test Result:	Apr 26 2009
Average of Test Results Over the Quarter:	29.241 mg/m3
98th Percentile Value:	33.41 mg/m3
Data Recovery:	100 %
Comments:	A=1 hr data

#### 04B - Power boiler #4

##### Nitrogen Oxides

Test Date Range:	April 1 - June 30
Total Hours of Data Collected:	91 hrs
Permitted Flow Limit:	7600 m3/min
Average Measured CEM Flow:	
Contaminant Permit Limit Value:	35 mg/m3
Minimum Hourly Average Test Result:	10.9 mg/m3
Date/Time of Minimum Hourly Average Test Result:	Apr 25 2009
Maximum Hourly Average Test Result:	30.9 mg/m3
Date/Time of Maximum Hourly Average Test Result:	Apr 02 2009
Average of Test Results Over the Quarter:	27.418 mg/m3
98th Percentile Value:	30.868 mg/m3
Data Recovery:	100 %
Comments:	B=24 hr data

#### 05A - Power boiler #5

##### Nitrogen Oxides

Test Date Range:	April 1 - June 30
Total Hours of Data Collected:	66 hrs
Permitted Flow Limit:	7600 m3/min
Average Measured CEM Flow:	
Contaminant Permit Limit Value:	52 mg/m3
Minimum Hourly Average Test Result:	8.3 mg/m3
Date/Time of Minimum Hourly Average Test Result:	Apr 25 2009
Maximum Hourly Average Test Result:	36.3 mg/m3
Date/Time of Maximum Hourly Average Test Result:	Apr 25 2009
Average of Test Results Over the Quarter:	29.445 mg/m3
98th Percentile Value:	34.27 mg/m3
Data Recovery:	100 %
Comments:	A=1 hr data

#### 05B - Power boiler #5

##### Nitrogen Oxides

Test Date Range:	April 1 - June 30
Total Hours of Data Collected:	66 hrs
Permitted Flow Limit:	7600 m3/min
Average Measured CEM Flow:	
Contaminant Permit Limit Value:	35 mg/m3
Minimum Hourly Average Test Result:	9 mg/m3
Date/Time of Minimum Hourly Average Test Result:	Apr 25 2009
Maximum Hourly Average Test Result:	32.8 mg/m3
Date/Time of Maximum Hourly Average Test Result:	Apr 26 2009
Average of Test Results Over the Quarter:	25.06 mg/m3
98th Percentile Value:	31.91 mg/m3
Data Recovery:	100 %
Comments:	B=24 hr data

**06A - Power boiler #6**

**Nitrogen Oxides**

Test Date Range:	April 1 - June 30
Total Hours of Data Collected:	15 hrs
Permitted Flow Limit:	7600 m3/min
Average Measured CEM Flow:	
Contaminant Permit Limit Value:	52 mg/m3
Minimum Hourly Average Test Result:	14.4 mg/m3
Date/Time of Minimum Hourly Average Test Result:	May 11 2009
Maximum Hourly Average Test Result:	48.5 mg/m3
Date/Time of Maximum Hourly Average Test Result:	May 08 2009
Average of Test Results Over the Quarter:	32.18 mg/m3
98th Percentile Value:	48.5 mg/m3
Data Recovery:	100 %
Comments:	unit ran for testing and commissioning of the new generator voltage regulator during this quarter. A=1 hr data

**06B - Power boiler #6**

**Nitrogen Oxides**

Test Date Range:	April 1 - June 30
Total Hours of Data Collected:	7 hrs
Permitted Flow Limit:	7600 m3/min
Average Measured CEM Flow:	
Contaminant Permit Limit Value:	35 mg/m3
Minimum Hourly Average Test Result:	11.096 mg/m3
Date/Time of Minimum Hourly Average Test Result:	May 11 2009
Maximum Hourly Average Test Result:	17.321 mg/m3
Date/Time of Maximum Hourly Average Test Result:	May 11 2009
Average of Test Results Over the Quarter:	14.051 mg/m3
98th Percentile Value:	17.207 mg/m3
Data Recovery:	100 %
Comments:	B=24 hr data