

**BROOKFIELD RENEWABLE POWER PINEY & DEEP CREEK, LLC**  
**Deep Creek Hydroelectric Station**

**2008 Annual Report**

**Maryland Department of the Environment**  
**Water Appropriation and Use Permit No. GA1992S009(07)**

**January 2009**

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## 1.0 SUMMARY

Brookfield Renewable Power Piney & Deep Creek, LLC (Brookfield) holds a Water Appropriation and Use Permit (Permit), issued on April 1, 2007, that provides for the continued operation of the Deep Creek Hydroelectric Station. Permit Condition 23 requires Brookfield to submit an annual report to the Maryland Department of the Environment (MDE), which includes data and information as specified in the Permit Conditions listed below:

- Lake level monitoring (Condition 15)
- Temperature monitoring (Condition 16)
- Minimum flow release monitoring (Condition 17)
- Dissolved oxygen (DO) monitoring (Condition 18)
- Releases unsuitable for whitewater recreation (Condition 19)
- Zebra mussel monitoring (Condition 21)

### 1.1 Lake Level Monitoring

#### 1.1.1 End-of-Month Levels

Appendix A contains daily water level data for 2008 in tabular and graphical format. Reservoir levels did not exceed the desired end-of-month Upper Rule Band (URB) or the desired end-of-month Lower Rule Band (LRB) during 2008. Reservoir levels were below the URB for 2008 as follows:

**TABLE 1 - Lake Level (in feet) Below URB**

<b>MONTH OF YEAR</b>	<b>FEET ABOVE (+) or BELOW (-) URB</b>
January	-1.0
February	-0.4
March	-0.0
April	-0.1
May	-0.2
June	-0.2
July	-0.1
August	-0.3
September	-0.8
October	-1.0
November	-0.6
December	-0.4

### 1.1.2 Daily Levels

The following describes each daily variance of the URB and LRB. Appendix A provides a graphical and tabular summary of these daily variances. The Deep Creek Reservoir level remained above the LRB for all of 2008.

- The Deep Creek Reservoir level was maintained within the URB and LRB between elevations 2,456.6 feet mean sea level (msl) and 2,457.9 feet msl from January 1 through February 6.
- Between February 7 and February 11, the Deep Creek watershed received over 4 inches of precipitation, causing the reservoir to rise above the URB by 0.1 to 0.5 feet, to a maximum elevation of 2,458.4 feet msl from February 7 through February 11.
- The Deep Creek Reservoir remained at or below the URB from February 12 through May 10.
- Between May 8 and May 12, the Deep Creek watershed received over 3.3 inches of precipitation, causing the reservoir to rise above the URB by 0.1 to 0.2 feet between May 11 and May 14, to a maximum elevation of 2,461.2 feet msl.
- The Deep Creek Reservoir remained at or below the URB from May 15 through May 26.
- On May 27, the Deep Creek Reservoir elevation increased slightly to 0.1 feet above the URB, to an elevation of 2,461.0.
- The Deep Creek Reservoir remained at or below the URB from May 28 through June 4.
- On June 4 and 5, the Deep Creek watershed received over 3.25 inches of precipitation, causing the reservoir to rise above the URB by 0.1 to 0.2 feet on June 5 and 6, respectively, to a maximum elevation of 2,461.2 feet msl.
- The Deep Creek Reservoir remained at or below the URB from June 7 through August 2.
- Between July 31 and August 4, the Deep Creek watershed received over 2.4 inches of precipitation, causing the reservoir to rise above the URB by 0.1 to 1.1 feet from August 3 through August 22, to a maximum elevation of 2,460.1 feet msl.



- The Deep Creek Reservoir remained at or below the URB from August 4 through December 14.
- Between December 10 and December 25, the Deep Creek watershed received approximately 7 inches of precipitation, causing the reservoir to rise above the URB by 0.1 to 0.6 feet between December 15 and December 26 (excluding December 24), to a maximum elevation of 2,458.5 feet msl. In addition, December temperatures for the Deep Creek area were above normal.

## 1.2 Temperature Monitoring

Brookfield monitored water temperature in the Youghiogheny River in accordance with the Deep Creek Station Water Temperature Enhancement Plan (approved June 8, 1996, revised September 2001).<sup>1</sup> The plan was designed to maintain river water temperatures below 25 degrees Celsius (°C) in the Youghiogheny River.

By letters dated July 3, August 19, and September 9, 2008, Brookfield provided the MDE with temperature excursion dates at the Sang Run temperature monitoring station, and an explanation for those excursions. The primary reason for these excursions was due to the inherent unpredictability of the model. This model attempts to predict future temperatures of the Youghiogheny River, based on air temperature readings, cloud cover factor, cloud cover forecast, river flow, and actual water temperature readings. Due to the multitude of parameters used in the predictions, inherent variability in the predicted temperatures exists.

Brookfield released water on 11 days in 2008, two of which were a combined temperature enhancement and whitewater release. Temperature enhancement releases occurred on July 16, 17, 19, and 20, and August 20, 21, 23, 24, and 31. Combined releases occurred on June 18 and August 1.

The temperature enhancement protocol predicted water temperatures in excess of 25°C on July 16 to 20, and August 1, 18 to 24, and 31. Appendix B presents the Sang Run temperature

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<sup>1</sup> By letter dated January 9, 2009, MDE provided Brookfield a copy of the January 2009 revision to the Deep Creek Station Youghiogheny River Water Temperature Enhancement Plan, and notified Brookfield that MDE planned to formally adopt the revised protocol on February 1, 2009.

excursion dates, the duration of each excursion, an explanation for the excursion, and the maximum temperature for each date, during the period of June 1 through August 31, 2008.

Water temperature at Sang Run reached 25° C or greater on July 15, 17 to 20, 22, 27, 29, and August 20, 21 and 31, according to the Sang Run temperature data acquired by Brookfield.

Brookfield did not release water from June 1 through June 25, from June 29 through July 14, July 21, from July 23 through July 28, July 31, and from August 3 through August 8, in accordance with the Water Temperature Enhancement Plan, as the flow at the Oakland gage was above 100 cubic feet per second (cfs).

Appendix B presents 1) results of the temperature monitoring at Sang Run for June through August, 2) the temperature enhancement release dates, and 3) the daily Deep Creek Station Water Temperature Enhancement Plan data sheets.

### **1.3 Minimum Flow Release Monitoring**

Brookfield operated the flow bypass in accordance with the Deep Creek Station Flow Bypass Operation Protocol (May 1995, revised September 2001). The flow bypass protocol requires Brookfield to maintain a minimum flow of 40 cfs in the Youghiogheny River immediately downstream of the tailrace. Starting January 1 and continuing through December 31, Brookfield monitored the river flows at the Oakland gage. As required by the protocol, when calculated flows downstream of the tailrace are below 40 cfs, Brookfield may be required to open a bypass valve to release enough water to maintain 40 cfs.

The 2008 water year was a below-average precipitation year. Brookfield provided bypass flow to the Youghiogheny River below the project tailrace on 68 days.

The table in Appendix C summarizes flow bypass data for August through November 2008, when flows in the Youghiogheny River were less than 26 cfs. Flow data were obtained from the U.S. Geological Survey (USGS) recording at the Oakland gage, direct readings from the Oakland gage, or from the tailrace gage at the station, per guidance provided in the protocol. Valve openings (see Appendix C) were determined from Table 3 of the protocol and were based on station operating status.

#### **1.4 Dissolved Oxygen Monitoring**

Brookfield operated the dissolved oxygen (DO) enhancement weir during 2008 in accordance with the Dissolved Oxygen Enhancement Operations and Monitoring Protocol approved by the MDE on January 6, 1995. In June, instantaneous DO measurements ranged from a low of 6.22 mg/L on June 30 to a high of 9.81 mg/L on June 10. In July, instantaneous DO measurements ranged from a low of 3.84 mg/L on July 28 to a high of 7.74 mg/L on July 7. In August, instantaneous DO measurements ranged from a low of 3.03 mg/L on August 9 to a high of 7.00 mg/L on August 21. In September, instantaneous DO measurements ranged from a low of 3.16 mg/L on September 1 to a high of 7.45 mg/L on September 29. All data obtained from DO monitoring in 2008 are included in Appendix D.

#### **1.5 Releases Unsuitable for Whitewater Recreation**

Permit Condition 19 outlines several operating rules designed to enhance whitewater boating opportunities in the Youghiogheny River.

Permit Condition 19.A provides a standard whitewater release (WWR) schedule, a special WWR schedule, and a provision that allows Brookfield to combine temperature enhancement releases with scheduled WWR. These conditions apply from April 15 through October 15, annually.

Permit Condition 19.B provides additional operating rules that place conditions on the operations of the Deep Creek facility, based on flows at the Friendsville gage and Deep Creek Lake levels.

More specifically, Permit Condition 19.B.V allows Brookfield to employ either a “3<sup>rd</sup> Hour Regulation” or an “All Hour Regulation” approach for plant operations, in addition to the previously referenced conditions.

Additional details of these permit conditions can be found in Appendix E.

No releases unsuitable for whitewater recreation occurred during 2008.

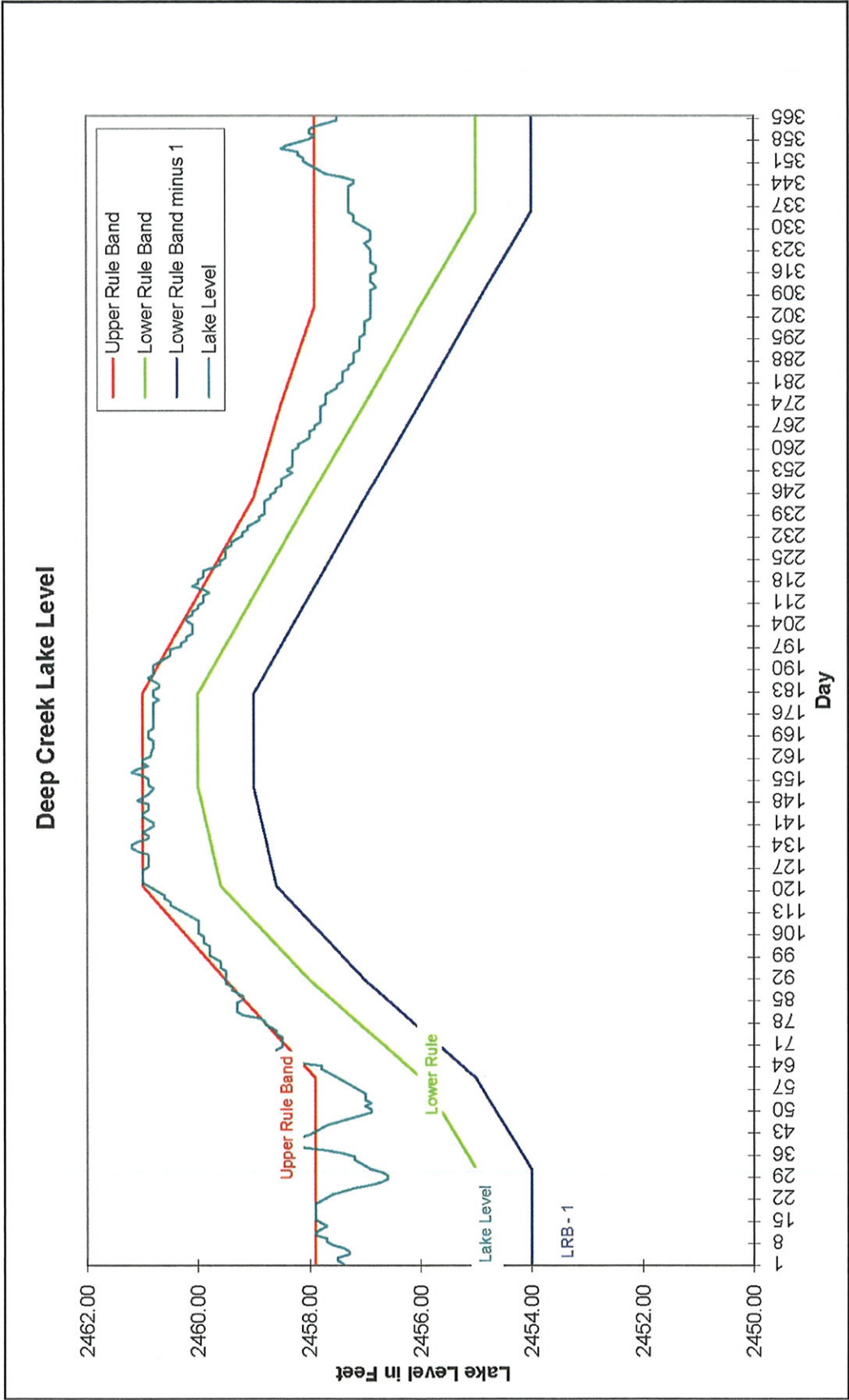
## **1.6 Zebra Mussel Monitoring**

Artificial substrates placed at the station intake area during 2008 showed no signs of zebra mussel infestation. Appendix F contains the 2008 Zebra Mussel Monitoring Report data sheets.

**APPENDIX A**

**DEEP CREEK LAKE LEVEL GRAPH AND  
DEEP CREEK DAILY LAKE LEVEL DATA TABLES**





**DEEP CREEK LAKE LEVEL GRAPH - 2008**

**Deep Creek Daily Lake Level 2008**

Month	Day	Lake Level (feet msl)	Rainfall (inches)	Month	Day	Lake Level (feet msl)	Rainfall (inches)	Month	Day	Lake Level (feet msl)	Rainfall (inches)
Jan	1	2457.4	0.10	Feb	1	2457	0.15	Mar	1	2457.6	0.63
	2	2457.5	0.23		2	2457.1	0.84		2	2457.7	0.06
	3	2457.5	0.18		3	2457.2	0.05		3	2457.8	0.00
	4	2457.3	0.00		4	2457.2	0.15		4	2457.8	0.00
	5	2457.3	0.00		5	2457.4	0.07		5	2458.3	0.81
	6	2457.4	0.36		6	2457.7	0.75		6	2458.5	0.00
	7	2457.6	0.11		7	2458.2	0.90		7	2458.6	0.00
	8	2457.7	0.00		8	2458.4	0.00		8	2458.6	0.24
	9	2457.7	0.17		9	2458.3	0.02		9	2458.6	0.19
	10	2457.88	0.00		10	2458.2	0.12		10	2458.5	0.00
	11	2457.9	1.00		11	2458	0.00		11	2458.5	0.00
	12	2457.8	0.23		12	2457.9	0.11		12	2458.5	0.02
	13	2457.7	0.00		13	2457.8	0.00		13	2458.5	0.00
	14	2457.8	0.15		14	2457.7	0.00		14	2458.6	0.00
	15	2457.9	0.12		15	2457.5	0.00		15	2458.6	0.45
	16	2457.9	0.13		16	2457.3	0.00		16	2458.69	0.20
	17	2457.9	0.06		17	2457.1	0.00		17	2458.8	0.00
	18	2457.9	0.35		18	2456.9	0.29		18	2458.8	0.00
	19	2457.9	0.00		19	2456.9	0.07		19	2458.9	0.85
	20	2457.9	0.00		20	2457	0.00		20	2459.2	1.44
	21	2457.8	0.00		21	2456.9	0.08		21	2459.3	0.00
	22	2457.7	0.00		22	2457	0.22		22	2459.3	0.00
	23	2457.6	0.15		23	2457	0.37		23	2459.3	0.03
	24	2457.4	0.00		24	2457	0.00		24	2459.3	0.00
	25	2457.2	0.03		25	2457.1	0.00		25	2459.2	0.00
	26	2456.9	0.00		26	2457.2	0.02		26	2459.2	0.00
	27	2456.7	0.07		27	2457.3	0.77		27	2459.3	0.00
	28	2456.6	0.00		28	2457.4	0.27		28	2459.4	0.28
	29	2456.6	0.02		29	2457.5	0.02		29	2459.4	0.02
	30	2456.7	1.15						30	2459.5	0.00
	31	2456.9	0.00						31	2459.5	0.00
<b>Total</b>			<b>4.51</b>				<b>5.48</b>				<b>5.22</b>



**Deep Creek Daily Lake Level 2008**

<b>Month</b>	<b>Day</b>	<b>Lake Level (feet msl)</b>	<b>Rainfall (inches)</b>	<b>Month</b>	<b>Day</b>	<b>Lake Level (feet msl)</b>	<b>Rainfall (inches)</b>	<b>Month</b>	<b>Day</b>	<b>Lake Level (feet msl)</b>	<b>Rainfall (inches)</b>
<b>Apr</b>	1	2459.5	0.05	<b>May</b>	1	2461.0	0.00	<b>Jun</b>	1	2460.9	0.81
	2	2459.5	0.02		2	2461.0	0.05		2	2460.9	0.00
	3	2459.5	0.00		3	2461.0	0.00		3	2460.9	0.00
	4	2459.6	0.35		4	2461.0	0.28		4	2461.0	0.90
	5	2459.6	0.46		5	2461.0	0.00		5	2461.2	2.36
	6	2459.6	0.05		6	2460.9	0.00		6	2461.1	0.00
	7	2459.7	0.06		7	2460.9	0.00		7	2460.9	0.00
	8	2459.8	0.00		8	2460.9	0.37		8	2461.0	0.00
	9	2459.8	0.00		9	2460.9	0.50		9	2461.0	0.00
	10	2459.8	0.00		10	2460.9	0.95		10	2460.9	0.00
	11	2459.8	0.00		11	2461.1	0.32		11	2460.8	0.74
	12	2459.9	0.12		12	2461.2	1.20		12	2460.8	0.00
	13	2459.9	0.00		13	2461.2	0.00		13	2460.8	0.00
	14	2459.9	0.30		14	2461.1	0.00		14	2460.8	0.07
	15	2460.0	0.00		15	2460.9	0.15		15	2460.8	0.46
	16	2460.0	0.00		16	2460.9	0.83		16	2460.9	0.00
	17	2460.0	0.00		17	2461.0	0.65		17	2460.9	0.43
	18	2460.0	0.00		18	2460.9	0.24		18	2460.9	0.00
	19	2460.0	0.00		19	2460.8	0.77		19	2460.8	0.05
	20	2460.1	0.85		20	2460.8	0.25		20	2460.8	0.00
	21	2460.2	0.00		21	2460.9	0.37		21	2460.8	0.00
	22	2460.3	0.32		22	2461.0	0.27		22	2460.8	0.55
	23	2460.4	0.02		23	2461.0	0.05		23	2460.8	0.00
	24	2460.5	0.00		24	2460.9	0.00		24	2460.8	0.15
	25	2460.5	0.00		25	2460.9	0.00		25	2460.8	0.00
	26	2460.6	0.00		26	2460.9	0.00		26	2460.8	0.05
	27	2460.6	0.25		27	2461.1	0.50		27	2460.8	0.13
	28	2460.7	0.37		28	2461.0	0.27		28	2460.7	0.00
	29	2460.8	0.55		29	2460.9	0.00		29	2460.8	0.78
	30	2460.9	0.17		30	2460.8	0.00		30	2460.8	0.10
					31	2460.8	0.02				
<b>Total</b>			<b>3.94</b>				<b>8.04</b>				<b>7.58</b>

**Deep Creek Daily Lake Level 2008**

<b>Month</b>	<b>Day</b>	<b>Lake Level (feet msl)</b>	<b>Rainfall (inches)</b>	<b>Month</b>	<b>Day</b>	<b>Lake Level (feet msl)</b>	<b>Rainfall (inches)</b>	<b>Month</b>	<b>Day</b>	<b>Lake Level (feet msl)</b>	<b>Rainfall (inches)</b>
<b>Jul</b>	1	2460.8	0.22	<b>Aug</b>	1	2459.8	0.37	<b>Sep</b>	1	2458.7	0.00
	2	2460.7	0.00		2	2459.9	1.20		2	2458.6	0.00
	3	2460.7	0.00		3	2460.1	0.32		3	2458.6	0.00
	4	2460.8	0.60		4	2460.0	0.00		4	2458.5	0.00
	5	2460.9	1.00		5	2460.0	0.05		5	2458.5	0.00
	6	2460.8	0.10		6	2459.9	0.00		6	2458.5	0.07
	7	2460.8	0.00		7	2459.9	0.21		7	2458.4	0.04
	8	2460.8	0.74		8	2459.9	0.00		8	2458.3	0.00
	9	2460.8	0.20		9	2459.7	0.00		9	2458.4	0.67
	10	2460.7	0.00		10	2459.6	0.00		10	2458.3	0.43
	11	2460.6	0.00		11	2459.6	0.00		11	2458.3	0.00
	12	2460.5	0.00		12	2459.5	0.00		12	2458.3	0.05
	13	2460.5	0.00		13	2459.5	0.00		13	2458.3	0.75
	14	2460.5	0.12		14	2459.5	0.00		14	2458.3	0.15
	15	2460.3	0.00		15	2459.5	0.00		15	2458.3	0.03
	16	2460.3	0.00		16	2459.4	0.00		16	2458.2	0.00
	17	2460.2	0.00		17	2459.4	0.00		17	2458.2	0.00
	18	2460.2	0.00		18	2459.3	0.00		18	2458.1	0.00
	19	2460.1	0.00		19	2459.2	0.00		19	2458.0	0.00
	20	2460.1	0.00		20	2459.2	0.00		20	2458.0	0.00
	21	2460.1	0.95		21	2459.1	0.00		21	2458.0	0.00
	22	2460.1	0.25		22	2459.1	0.00		22	2457.9	0.00
	23	2460.2	1.74		23	2459.0	0.00		23	2457.9	0.00
	24	2460.2	0.46		24	2458.9	0.00		24	2457.8	0.00
	25	2460.1	0.00		25	2458.9	0.00		25	2457.8	0.00
	26	2460.1	0.00		26	2458.8	0.00		26	2457.8	0.06
	27	2460.0	0.09		27	2458.8	0.00		27	2457.8	0.04
	28	2460.0	0.00		28	2458.8	0.55		28	2457.8	0.10
	29	2459.9	0.00		29	2458.8	0.20		29	2457.8	0.07
	30	2459.9	0.00		30	2458.8	0.00		30	2457.7	0.00
	31	2459.9	0.56		31	2458.7	0.18				
<b>Total</b>			<b>7.03</b>				<b>3.08</b>				<b>2.46</b>

**Deep Creek Daily Lake Level 2008**

<b>Month</b>	<b>Day</b>	<b>Lake Level (feet msl)</b>	<b>Rainfall (inches)</b>	<b>Month</b>	<b>Day</b>	<b>Lake Level (feet msl)</b>	<b>Rainfall (inches)</b>	<b>Month</b>	<b>Day</b>	<b>Lake Level (feet msl)</b>	<b>Rainfall (inches)</b>
<b>Oct</b>	1	2457.7	0.00	<b>Nov</b>	1	2456.9	0.00	<b>Dec</b>	1	2457.3	0.30
	2	2457.7	0.13		2	2456.9	0.00		2	2457.3	0.08
	3	2457.7	0.00		3	2456.9	0.00		3	2457.3	0.00
	4	2457.6	0.00		4	2456.9	0.00		4	2457.3	0.04
	5	2457.5	0.00		5	2456.9	0.00		5	2457.3	0.20
	6	2457.5	0.00		6	2456.8	0.00		6	2457.3	0.00
	7	2457.4	0.00		7	2456.8	0.00		7	2457.3	0.10
	8	2457.4	0.00		8	2456.9	0.02		8	2457.3	0.00
	9	2457.4	0.12		9	2456.9	0.00		9	2457.2	0.00
	10	2457.4	0.00		10	2456.9	0.02		10	2457.2	0.34
	11	2457.3	0.00		11	2456.8	0.00		11	2457.4	0.62
	12	2457.3	0.00		12	2456.8	0.00		12	2457.7	1.50
	13	2457.2	0.00		13	2456.8	0.00		13	2457.8	0.08
	14	2457.2	0.00		14	2456.9	0.30		14	2457.9	0.03
	15	2457.2	0.00		15	2456.9	0.12		15	2458.0	0.02
	16	2457.2	0.00		16	2456.9	0.41		16	2458.1	0.26
	17	2457.1	0.17		17	2456.9	0.02		17	2458.1	0.74
	18	2457.1	0.00		18	2456.9	0.25		18	2458.2	0.23
	19	2457.1	0.00		19	2457.0	0.07		19	2458.2	0.04
	20	2457.1	0.00		20	2457.0	0.00		20	2458.5	1.52
	21	2457.1	0.00		21	2456.9	0.08		21	2458.4	0.05
	22	2457.0	0.02		22	2456.9	0.26		22	2458.2	0.03
	23	2457.0	0.00		23	2456.9	0.05		23	2458.0	0.00
	24	2457.0	0.00		24	2456.9	0.00		24	2457.9	0.23
	25	2457.0	0.09		25	2457.0	0.92		25	2458.0	1.22
	26	2457.0	0.48		26	2457.1	0.33		26	2458.0	0.00
	27	2456.9	0.00		27	2457.2	0.25		27	2457.9	0.35
	28	2456.9	0.18		28	2457.2	0.00		28	2457.7	0.04
	29	2456.9	0.25		29	2457.2	0.00		29	2457.5	0.00
	30	2456.9	0.40		30	2457.3	0.00		30	2457.5	0.00
	31	2456.9	0.00						31	2457.5	0.00
<b>Total</b>			<b>1.84</b>				<b>3.10</b>				<b>8.02</b>
										<b>Year Total</b>	<b>60.3</b>

**SUMMARY OF DAILY VARIANCES OF THE UPPER AND LOWER  
RULE BANDS - 2008**

**SUMMARY OF DAILY VARIANCES OF THE UPPER AND LOWER RULE BANDS - 2008**

<b>Date</b>	<b>Reservoir Level (feet)</b>	<b>Upper Rule Band (feet)</b>	<b>Lower Rule Band (feet)</b>	<b>Δ (feet)</b>
February 7	2458.2	2457.90	2456.0	0.3
February 8	2458.4	2457.90	2456.0	0.5
February 9	2458.3	2457.90	2456.0	0.4
February 10	2458.2	2457.90	2456.0	0.3
February 11	2458.0	2457.90	2456.0	0.1
May 11	2461.1	2461.0	2460.0	0.1
May 12	2461.2	2461.0	2460.0	0.2
May 13	2461.2	2461.0	2460.0	0.2
May 14	2461.1	2461.0	2460.0	0.1
May 27	2461.1	2461.0	2460.0	0.1
June 5	2461.2	2461.0	2460.0	0.2
June 6	2461.1	2461.0	2460.0	0.1
August 3	2460.1	2460.0	2459.0	0.1
December 15	2458.0	2457.9	2455.0	0.1
December 16	2458.1	2457.9	2455.0	0.2
December 17	2458.1	2457.9	2455.0	0.2
December 18	2458.2	2457.9	2455.0	0.3
December 19	2458.2	2457.9	2455.0	0.3
December 20	2458.5	2457.9	2455.0	0.6
December 21	2458.4	2457.9	2455.0	0.5
December 22	2458.2	2457.9	2455.0	0.3
December 23	2458.0	2457.9	2455.0	0.1
December 25	2458.0	2457.9	2455.0	0.1
December 26	2458.0	2457.9	2455.0	0.1

## **APPENDIX B**

**DAILY RIVER WATER TEMPERATURES AT SANG RUN**

**TEMPERATURE ENHANCEMENT PLAN SANG RUN  
TEMPERATURE EXCURSIONS**

**TEMPERATURE ENHANCEMENT PLAN RELEASE DATA  
TABLES**

**TEMPERATURE ENHANCEMENT PLAN DAILY SHEETS**

Water temperature is measured from a temperature probe seasonally installed and maintained by Brookfield in the Youghiogheny River at the Sang Run Bridge. The instrument records water temperature at 10-minute intervals, has a monitoring accuracy of 0.1°C, and is calibrated in accordance with the manufacturer's instructions. Data is retrieved from the instrument by Brookfield's Hydro Control Center in Liverpool, New York via telephone modem.

Days when temperatures exceeded 25°C and days when temperature enhancement releases were made are summarized in the following tables. Daily Temperature Enhancement Plan sheets for each of these dates are also included.

**DAILY RIVER WATER TEMPERATURES AT SANG RUN**



## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/1/2008	0:00:00	15.98	8:00:00	15.2	16:00:00	17.19
	0:10:00	15.93	8:10:00	15.2	16:10:00	17.17
	0:20:00	15.99	8:20:00	15.21	16:20:00	17.16
	0:30:00	16.01	8:30:00	15.17	16:30:00	17.15
	0:40:00	15.95	8:40:00	15.16	16:40:00	17.13
	0:50:00	15.88	8:50:00	15.16	16:50:00	17.19
	1:00:00	15.86	9:00:00	15.16	17:00:00	17.17
	1:10:00	15.88	9:10:00	15.18	17:10:00	17.22
	1:20:00	15.86	9:20:00	15.14	17:20:00	17.22
	1:30:00	15.83	9:30:00	15.24	17:30:00	17.17
	1:40:00	15.81	9:40:00	15.21	17:40:00	17.13
	1:50:00	15.8	9:50:00	15.26	17:50:00	17.02
	2:00:00	15.71	10:00:00	15.32	18:00:00	16.63
	2:10:00	15.71	10:10:00	15.32	18:10:00	16.19
	2:20:00	15.66	10:20:00	15.32	18:20:00	15.91
	2:30:00	15.69	10:30:00	15.36	18:30:00	15.75
	2:40:00	15.64	10:40:00	15.38	18:40:00	15.75
	2:50:00	15.7	10:50:00	15.4	18:50:00	15.66
	3:00:00	15.61	11:00:00	15.45	19:00:00	15.6
	3:10:00	15.58	11:10:00	15.49	19:10:00	15.56
	3:20:00	15.58	11:20:00	15.45	19:20:00	15.51
	3:30:00	15.54	11:30:00	15.5	19:30:00	15.4
	3:40:00	15.52	11:40:00	15.47	19:40:00	15.45
	3:50:00	15.5	11:50:00	15.54	19:50:00	15.51
	4:00:00	15.5	12:00:00	15.6	20:00:00	15.51
	4:10:00	15.48	12:10:00	15.64	20:10:00	15.49
	4:20:00	15.41	12:20:00	15.71	20:20:00	15.45
	4:30:00	15.42	12:30:00	15.82	20:30:00	15.41
	4:40:00	15.4	12:40:00	15.82	20:40:00	15.38
	4:50:00	15.37	12:50:00	15.86	20:50:00	15.32
	5:00:00	15.37	13:00:00	15.95	21:00:00	15.25
	5:10:00	15.38	13:10:00	15.95	21:10:00	15.16
	5:20:00	15.36	13:20:00	16.06	21:20:00	15.16
	5:30:00	15.32	13:30:00	15.99	21:30:00	15.08
	5:40:00	15.34	13:40:00	16.01	21:40:00	15.05
	5:50:00	15.32	13:50:00	16.01	21:50:00	15.05
	6:00:00	15.32	14:00:00	16.04	22:00:00	15.12
	6:10:00	15.27	14:10:00	15.99	22:10:00	15.34
	6:20:00	15.32	14:20:00	15.97	22:20:00	15.58
	6:30:00	15.27	14:30:00	15.97	22:30:00	15.77
	6:40:00	15.23	14:40:00	15.92	22:40:00	15.86
	6:50:00	15.28	14:50:00	16.08	22:50:00	15.93
	7:00:00	15.23	15:00:00	16.42	23:00:00	15.99
	7:10:00	15.27	15:10:00	16.6	23:10:00	16.06
	7:20:00	15.21	15:20:00	16.8	23:20:00	16.08
	7:30:00	15.21	15:30:00	17.02	23:30:00	16.09
	7:40:00	15.21	15:40:00	17.17	23:40:00	16.08
	7:50:00	15.21	15:50:00	17.17	23:50:00	16.09

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/2/2008	0:00:00	16.1	8:00:00	14.98	16:00:00	16.87
	0:10:00	16.07	8:10:00	14.83	16:10:00	16.43
	0:20:00	16.08	8:20:00	14.67	16:20:00	16.47
	0:30:00	16.05	8:30:00	14.72	16:30:00	16.47
	0:40:00	16.05	8:40:00	14.89	16:40:00	16.49
	0:50:00	16.03	8:50:00	14.9	16:50:00	16.56
	1:00:00	15.98	9:00:00	14.88	17:00:00	16.56
	1:10:00	15.98	9:10:00	14.86	17:10:00	16.56
	1:20:00	15.96	9:20:00	14.89	17:20:00	16.56
	1:30:00	15.96	9:30:00	14.87	17:30:00	16.52
	1:40:00	15.91	9:40:00	14.93	17:40:00	16.54
	1:50:00	15.91	9:50:00	14.93	17:50:00	16.45
	2:00:00	15.89	10:00:00	14.98	18:00:00	16.49
	2:10:00	15.85	10:10:00	15	18:10:00	16.89
	2:20:00	15.83	10:20:00	15.05	18:20:00	17.12
	2:30:00	15.83	10:30:00	15.1	18:30:00	16.76
	2:40:00	15.77	10:40:00	15.16	18:40:00	16.45
	2:50:00	15.74	10:50:00	15.26	18:50:00	16.17
	3:00:00	15.74	11:00:00	15.32	19:00:00	16.06
	3:10:00	15.7	11:10:00	15.36	19:10:00	16
	3:20:00	15.71	11:20:00	15.49	19:20:00	15.93
	3:30:00	15.7	11:30:00	15.58	19:30:00	15.86
	3:40:00	15.6	11:40:00	15.66	19:40:00	15.73
	3:50:00	15.63	11:50:00	15.76	19:50:00	15.58
	4:00:00	15.58	12:00:00	15.86	20:00:00	15.4
	4:10:00	15.57	12:10:00	16	20:10:00	15.45
	4:20:00	15.57	12:20:00	16.12	20:20:00	15.44
	4:30:00	15.54	12:30:00	16.19	20:30:00	15.4
	4:40:00	15.52	12:40:00	16.25	20:40:00	15.38
	4:50:00	15.53	12:50:00	16.36	20:50:00	15.38
	5:00:00	15.48	13:00:00	16.49	21:00:00	15.36
	5:10:00	15.47	13:10:00	16.67	21:10:00	15.42
	5:20:00	15.47	13:20:00	16.75	21:20:00	15.69
	5:30:00	15.45	13:30:00	16.8	21:30:00	15.95
	5:40:00	15.38	13:40:00	16.96	21:40:00	16.17
	5:50:00	15.38	13:50:00	17.06	21:50:00	16.3
	6:00:00	15.34	14:00:00	17.17	22:00:00	16.39
	6:10:00	15.32	14:10:00	17.27	22:10:00	16.49
	6:20:00	15.29	14:20:00	17.31	22:20:00	16.58
	6:30:00	15.27	14:30:00	17.41	22:30:00	16.58
	6:40:00	15.28	14:40:00	17.5	22:40:00	16.63
	6:50:00	15.24	14:50:00	17.54	22:50:00	16.6
	7:00:00	15.2	15:00:00	17.63	23:00:00	16.65
	7:10:00	15.17	15:10:00	17.7	23:10:00	16.64
	7:20:00	15.12	15:20:00	17.74	23:20:00	16.64
	7:30:00	15.11	15:30:00	17.67	23:30:00	16.58
	7:40:00	15.08	15:40:00	17.63	23:40:00	16.58
	7:50:00	15.05	15:50:00	17.56	23:50:00	16.6

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/3/2008	0:00:00	16.56	8:00:00	15.24	16:00:00	15.36
	0:10:00	16.58	8:10:00	15.15	16:10:00	15.36
	0:20:00	16.56	8:20:00	15.2	16:20:00	15.48
	0:30:00	16.56	8:30:00	15.2	16:30:00	15.53
	0:40:00	16.52	8:40:00	15.07	16:40:00	15.56
	0:50:00	16.45	8:50:00	15.09	16:50:00	15.51
	1:00:00	16.46	9:00:00	15.03	17:00:00	15.56
	1:10:00	16.41	9:10:00	15.32	17:10:00	15.49
	1:20:00	16.44	9:20:00	15.34	17:20:00	15.4
	1:30:00	16.4	9:30:00	15.38	17:30:00	15.32
	1:40:00	16.34	9:40:00	15.37	17:40:00	15.32
	1:50:00	16.33	9:50:00	15.35	17:50:00	15.34
	2:00:00	16.31	10:00:00	15.41	18:00:00	15.36
	2:10:00	16.29	10:10:00	15.44	18:10:00	15.38
	2:20:00	16.25	10:20:00	15.57	18:20:00	15.38
	2:30:00	16.17	10:30:00	15.62	18:30:00	15.34
	2:40:00	16.19	10:40:00	15.66	18:40:00	15.34
	2:50:00	16.1	10:50:00	15.82	18:50:00	15.32
	3:00:00	16.11	11:00:00	15.86	19:00:00	15.27
	3:10:00	16.09	11:10:00	15.97	19:10:00	15.25
	3:20:00	16.03	11:20:00	16.06	19:20:00	15.23
	3:30:00	15.96	11:30:00	16.16	19:30:00	15.21
	3:40:00	15.97	11:40:00	16.22	19:40:00	15.16
	3:50:00	15.88	11:50:00	16.32	19:50:00	15.16
	4:00:00	15.92	12:00:00	16.47	20:00:00	15.18
	4:10:00	15.87	12:10:00	16.54	20:10:00	15.16
	4:20:00	15.81	12:20:00	16.68	20:20:00	15.16
	4:30:00	15.77	12:30:00	16.8	20:30:00	15.1
	4:40:00	15.75	12:40:00	16.91	20:40:00	15.05
	4:50:00	15.7	12:50:00	16.89	20:50:00	15.01
	5:00:00	15.7	13:00:00	17	21:00:00	14.97
	5:10:00	15.68	13:10:00	17.07	21:10:00	14.97
	5:20:00	15.61	13:20:00	17.1	21:20:00	14.93
	5:30:00	15.58	13:30:00	17.11	21:30:00	14.97
	5:40:00	15.52	13:40:00	17.14	21:40:00	14.94
	5:50:00	15.52	13:50:00	17.11	21:50:00	14.93
	6:00:00	15.47	14:00:00	17	22:00:00	14.9
	6:10:00	15.45	14:10:00	16.2	22:10:00	14.88
	6:20:00	15.46	14:20:00	15.63	22:20:00	14.9
	6:30:00	15.39	14:30:00	15.6	22:30:00	14.94
	6:40:00	15.38	14:40:00	15.53	22:40:00	14.97
	6:50:00	15.29	14:50:00	15.47	22:50:00	15
	7:00:00	15.3	15:00:00	15.48	23:00:00	15.03
	7:10:00	15.29	15:10:00	15.47	23:10:00	15.01
	7:20:00	15.28	15:20:00	15.48	23:20:00	15.01
	7:30:00	15.21	15:30:00	15.48	23:30:00	14.94
	7:40:00	15.24	15:40:00	15.45	23:40:00	14.94
	7:50:00	15.23	15:50:00	15.42	23:50:00	14.94

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/4/2008	0:00:00	15	8:00:00	15.05	16:00:00	15.32
	0:10:00	15.01	8:10:00	15.05	16:10:00	15.34
	0:20:00	15.05	8:20:00	15.04	16:20:00	15.32
	0:30:00	15.1	8:30:00	15.09	16:30:00	15.33
	0:40:00	14.99	8:40:00	15.1	16:40:00	15.3
	0:50:00	14.92	8:50:00	15.1	16:50:00	15.29
	1:00:00	14.88	9:00:00	15.18	17:00:00	15.29
	1:10:00	14.86	9:10:00	15.18	17:10:00	15.26
	1:20:00	14.88	9:20:00	15.18	17:20:00	15.25
	1:30:00	15.05	9:30:00	15.2	17:30:00	15.28
	1:40:00	15.32	9:40:00	15.24	17:40:00	15.27
	1:50:00	15.54	9:50:00	15.23	17:50:00	15.25
	2:00:00	15.73	10:00:00	15.21	18:00:00	15.28
	2:10:00	15.84	10:10:00	15.24	18:10:00	15.27
	2:20:00	15.97	10:20:00	15.23	18:20:00	15.32
	2:30:00	16.06	10:30:00	15	18:30:00	15.34
	2:40:00	16.12	10:40:00	15.33	18:40:00	15.38
	2:50:00	16.17	10:50:00	15.33	18:50:00	15.41
	3:00:00	16.21	11:00:00	15.41	19:00:00	15.4
	3:10:00	16.21	11:10:00	15.44	19:10:00	15.41
	3:20:00	16.23	11:20:00	15.46	19:20:00	15.42
	3:30:00	16.27	11:30:00	15.44	19:30:00	15.48
	3:40:00	16.24	11:40:00	15.42	19:40:00	15.45
	3:50:00	16.28	11:50:00	15.46	19:50:00	15.47
	4:00:00	16.23	12:00:00	15.48	20:00:00	15.47
	4:10:00	16.24	12:10:00	15.51	20:10:00	15.49
	4:20:00	16.22	12:20:00	15.49	20:20:00	15.56
	4:30:00	16.17	12:30:00	15.49	20:30:00	15.53
	4:40:00	16.17	12:40:00	15.51	20:40:00	15.51
	4:50:00	16.16	12:50:00	15.53	20:50:00	15.53
	5:00:00	16.13	13:00:00	15.56	21:00:00	15.56
	5:10:00	16.13	13:10:00	15.58	21:10:00	15.56
	5:20:00	16.06	13:20:00	15.51	21:20:00	15.56
	5:30:00	16.08	13:30:00	15.49	21:30:00	15.56
	5:40:00	16.01	13:40:00	15.45	21:40:00	15.56
	5:50:00	16.01	13:50:00	15.49	21:50:00	15.56
	6:00:00	15.99	14:00:00	15.47	22:00:00	15.51
	6:10:00	15.99	14:10:00	15.42	22:10:00	15.49
	6:20:00	16.01	14:20:00	15.38	22:20:00	15.53
	6:30:00	15.95	14:30:00	15.34	22:30:00	15.51
	6:40:00	15.93	14:40:00	15.34	22:40:00	15.51
	6:50:00	15.93	14:50:00	15.4	22:50:00	15.49
	7:00:00	15.95	15:00:00	15.42	23:00:00	15.47
	7:10:00	15.93	15:10:00	15.38	23:10:00	15.51
	7:20:00	15.93	15:20:00	15.4	23:20:00	15.49
	7:30:00	15.49	15:30:00	15.34	23:30:00	15.47
	7:40:00	14.88	15:40:00	15.38	23:40:00	15.51
	7:50:00	15.02	15:50:00	15.36	23:50:00	15.51

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/5/2008	0:00:00	15.51	8:00:00	15.42	16:00:00	16.56
	0:10:00	15.51	8:10:00	15.45	16:10:00	16.54
	0:20:00	15.51	8:20:00	15.44	16:20:00	16.58
	0:30:00	15.56	8:30:00	15.45	16:30:00	16.56
	0:40:00	15.58	8:40:00	15.47	16:40:00	16.71
	0:50:00	15.49	8:50:00	15.45	16:50:00	16.76
	1:00:00	15.56	9:00:00	15.47	17:00:00	16.73
	1:10:00	15.51	9:10:00	15.45	17:10:00	16.71
	1:20:00	15.53	9:20:00	15.45	17:20:00	16.76
	1:30:00	15.51	9:30:00	15.49	17:30:00	16.71
	1:40:00	15.52	9:40:00	15.49	17:40:00	16.69
	1:50:00	15.56	9:50:00	15.56	17:50:00	16.69
	2:00:00	15.54	10:00:00	15.53	18:00:00	16.69
	2:10:00	15.53	10:10:00	15.49	18:10:00	16.67
	2:20:00	15.56	10:20:00	15.53	18:20:00	16.63
	2:30:00	15.58	10:30:00	15.6	18:30:00	16.58
	2:40:00	15.56	10:40:00	15.58	18:40:00	16.54
	2:50:00	15.53	10:50:00	15.69	18:50:00	16.56
	3:00:00	15.56	11:00:00	15.66	19:00:00	16.49
	3:10:00	15.58	11:10:00	15.74	19:10:00	16.49
	3:20:00	15.58	11:20:00	15.77	19:20:00	16.45
	3:30:00	15.57	11:30:00	15.8	19:30:00	16.41
	3:40:00	15.54	11:40:00	15.8	19:40:00	16.34
	3:50:00	15.54	11:50:00	15.88	19:50:00	16.3
	4:00:00	15.52	12:00:00	15.86	20:00:00	16.32
	4:10:00	15.53	12:10:00	15.95	20:10:00	16.28
	4:20:00	15.51	12:20:00	16.01	20:20:00	16.28
	4:30:00	15.51	12:30:00	16.06	20:30:00	16.23
	4:40:00	15.5	12:40:00	16.01	20:40:00	16.19
	4:50:00	15.51	12:50:00	16.11	20:50:00	16.17
	5:00:00	15.47	13:00:00	16.15	21:00:00	16.17
	5:10:00	15.49	13:10:00	16.17	21:10:00	16.15
	5:20:00	15.49	13:20:00	16.17	21:20:00	16.15
	5:30:00	15.49	13:30:00	16.51	21:30:00	16.08
	5:40:00	15.49	13:40:00	16.2	21:40:00	16.1
	5:50:00	15.52	13:50:00	16.29	21:50:00	16.08
	6:00:00	15.48	14:00:00	17.53	22:00:00	16.06
	6:10:00	15.49	14:10:00	16.37	22:10:00	16.1
	6:20:00	15.49	14:20:00	16.42	22:20:00	16.06
	6:30:00	15.47	14:30:00	16.4	22:30:00	16.06
6:40:00	15.49	14:40:00	16.41	22:40:00	16.06	
6:50:00	15.47	14:50:00	16.39	22:50:00	16.06	
7:00:00	15.47	15:00:00	16.36	23:00:00	16.06	
7:10:00	15.47	15:10:00	16.36	23:10:00	16.08	
7:20:00	15.45	15:20:00	16.35	23:20:00	16.01	
7:30:00	15.45	15:30:00	16.41	23:30:00	16.01	
7:40:00	15.45	15:40:00	16.47	23:40:00	16.01	
7:50:00	15.45	15:50:00	16.49	23:50:00	15.99	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/6/2008	0:00:00	16.01	8:00:00	15.72	16:00:00	17.7
	0:10:00	16.01	8:10:00	15.71	16:10:00	17.63
	0:20:00	15.97	8:20:00	15.71	16:20:00	17.72
	0:30:00	15.95	8:30:00	15.65	16:30:00	17.76
	0:40:00	15.97	8:40:00	15.71	16:40:00	17.7
	0:50:00	15.93	8:50:00	15.66	16:50:00	17.7
	1:00:00	15.91	9:00:00	15.71	17:00:00	17.67
	1:10:00	15.88	9:10:00	15.73	17:10:00	17.65
	1:20:00	15.88	9:20:00	15.77	17:20:00	17.67
	1:30:00	15.86	9:30:00	15.75	17:30:00	17.7
	1:40:00	15.84	9:40:00	15.84	17:40:00	17.65
	1:50:00	15.82	9:50:00	15.91	17:50:00	17.61
	2:00:00	15.82	10:00:00	15.97	18:00:00	17.59
	2:10:00	15.8	10:10:00	15.95	18:10:00	17.5
	2:20:00	15.77	10:20:00	16.04	18:20:00	17.5
	2:30:00	15.78	10:30:00	16.01	18:30:00	17.41
	2:40:00	15.75	10:40:00	16.06	18:40:00	17.35
	2:50:00	15.75	10:50:00	16.06	18:50:00	17.29
	3:00:00	15.74	11:00:00	16.06	19:00:00	17.22
	3:10:00	15.73	11:10:00	16.21	19:10:00	17.15
	3:20:00	15.69	11:20:00	16.28	19:20:00	17.06
	3:30:00	15.71	11:30:00	16.39	19:30:00	17
	3:40:00	15.7	11:40:00	16.41	19:40:00	16.95
	3:50:00	15.71	11:50:00	17.27	19:50:00	16.87
	4:00:00	15.69	12:00:00	17.4	20:00:00	16.84
	4:10:00	15.69	12:10:00	16.68	20:10:00	16.82
	4:20:00	15.71	12:20:00	17.75	20:20:00	16.8
	4:30:00	15.69	12:30:00	17.4	20:30:00	16.78
	4:40:00	15.7	12:40:00	17.78	20:40:00	16.76
	4:50:00	15.69	12:50:00	17.78	20:50:00	16.73
	5:00:00	15.73	13:00:00	18.11	21:00:00	16.71
	5:10:00	15.75	13:10:00	17.59	21:10:00	16.71
	5:20:00	15.71	13:20:00	17.89	21:20:00	16.71
	5:30:00	15.71	13:30:00	17.05	21:30:00	16.65
	5:40:00	15.66	13:40:00	17.16	21:40:00	16.6
	5:50:00	15.64	13:50:00	17.2	21:50:00	16.65
	6:00:00	15.68	14:00:00	17.25	22:00:00	16.69
	6:10:00	15.66	14:10:00	17.37	22:10:00	16.71
	6:20:00	15.64	14:20:00	17.37	22:20:00	16.71
	6:30:00	15.61	14:30:00	17.3	22:30:00	16.69
	6:40:00	15.6	14:40:00	17.37	22:40:00	16.67
	6:50:00	15.64	14:50:00	17.37	22:50:00	16.65
	7:00:00	15.64	15:00:00	17.5	23:00:00	16.67
	7:10:00	15.69	15:10:00	17.59	23:10:00	16.63
	7:20:00	15.63	15:20:00	17.59	23:20:00	16.6
	7:30:00	15.66	15:30:00	17.65	23:30:00	16.58
	7:40:00	15.69	15:40:00	17.65	23:40:00	16.56
	7:50:00	15.7	15:50:00	17.67	23:50:00	16.54

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/7/2008	0:00:00	16.47	8:00:00	15.93	16:00:00	21.06
	0:10:00	16.45	8:10:00	15.68	16:10:00	21.23
	0:20:00	16.41	8:20:00	15.62	16:20:00	21.33
	0:30:00	16.39	8:30:00	15.65	16:30:00	21.39
	0:40:00	16.41	8:40:00	15.61	16:40:00	21.43
	0:50:00	16.34	8:50:00	15.66	16:50:00	21.46
	1:00:00	16.32	9:00:00	15.73	17:00:00	21.39
	1:10:00	16.25	9:10:00	15.81	17:10:00	21.41
	1:20:00	16.29	9:20:00	15.81	17:20:00	21.36
	1:30:00	16.29	9:30:00	15.87	17:30:00	21.26
	1:40:00	16.27	9:40:00	15.98	17:40:00	21.28
	1:50:00	16.12	9:50:00	16.05	17:50:00	21.21
	2:00:00	15.99	10:00:00	16.04	18:00:00	21.19
	2:10:00	16.06	10:10:00	16.15	18:10:00	21.12
	2:20:00	16.11	10:20:00	16.28	18:20:00	21.06
	2:30:00	16.12	10:30:00	16.42	18:30:00	21.1
	2:40:00	16.07	10:40:00	16.47	18:40:00	21.06
	2:50:00	16.08	10:50:00	16.51	18:50:00	20.99
	3:00:00	16.1	11:00:00	16.56	19:00:00	20.97
	3:10:00	16.11	11:10:00	16.67	19:10:00	20.92
	3:20:00	16.08	11:20:00	16.91	19:20:00	20.84
	3:30:00	16.05	11:30:00	17.56	19:30:00	20.82
	3:40:00	16.01	11:40:00	17.62	19:40:00	20.73
	3:50:00	15.98	11:50:00	17.73	19:50:00	20.68
	4:00:00	15.91	12:00:00	17.86	20:00:00	20.64
	4:10:00	15.86	12:10:00	18.01	20:10:00	20.56
	4:20:00	15.92	12:20:00	18.09	20:20:00	20.51
	4:30:00	15.92	12:30:00	18.55	20:30:00	20.45
	4:40:00	15.95	12:40:00	18.81	20:40:00	20.43
	4:50:00	15.86	12:50:00	19.33	20:50:00	20.34
	5:00:00	15.88	13:00:00	18.84	21:00:00	20.32
	5:10:00	15.88	13:10:00	19.1	21:10:00	20.25
	5:20:00	15.88	13:20:00	19.36	21:20:00	20.21
	5:30:00	15.82	13:30:00	19.6	21:30:00	20.17
	5:40:00	15.76	13:40:00	19.81	21:40:00	20.16
	5:50:00	15.77	13:50:00	19.97	21:50:00	20.14
	6:00:00	15.93	14:00:00	20.12	22:00:00	20.14
	6:10:00	16.01	14:10:00	20.29	22:10:00	20.08
	6:20:00	16.08	14:20:00	20.45	22:20:00	20.1
	6:30:00	16.04	14:30:00	20.51	22:30:00	20.04
	6:40:00	16.04	14:40:00	20.56	22:40:00	20.08
	6:50:00	16.04	14:50:00	20.71	22:50:00	20.01
	7:00:00	16.01	15:00:00	20.91	23:00:00	20.03
	7:10:00	15.97	15:10:00	20.97	23:10:00	20.01
	7:20:00	15.95	15:20:00	21	23:20:00	19.99
	7:30:00	15.91	15:30:00	21.08	23:30:00	19.99
	7:40:00	15.93	15:40:00	21.07	23:40:00	19.95
	7:50:00	15.91	15:50:00	21.06	23:50:00	19.92

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/8/2008	0:00:00	19.9	8:00:00	18.61	16:00:00	19.18
	0:10:00	19.86	8:10:00	18.61	16:10:00	18.98
	0:20:00	19.86	8:20:00	18.63	16:20:00	18.9
	0:30:00	19.88	8:30:00	18.49	16:30:00	18.83
	0:40:00	19.81	8:40:00	18.71	16:40:00	18.74
	0:50:00	19.81	8:50:00	18.71	16:50:00	18.68
	1:00:00	19.81	9:00:00	18.73	17:00:00	18.61
	1:10:00	19.75	9:10:00	18.79	17:10:00	18.57
	1:20:00	19.75	9:20:00	18.81	17:20:00	18.53
	1:30:00	19.73	9:30:00	18.88	17:30:00	18.5
	1:40:00	19.64	9:40:00	18.94	17:40:00	18.39
	1:50:00	19.66	9:50:00	18.92	17:50:00	18.31
	2:00:00	19.66	10:00:00	19.03	18:00:00	18.3
	2:10:00	19.62	10:10:00	19.09	18:10:00	18.22
	2:20:00	19.6	10:20:00	19.18	18:20:00	18.07
	2:30:00	19.55	10:30:00	19.29	18:30:00	17.94
	2:40:00	19.52	10:40:00	19.36	18:40:00	17.83
	2:50:00	19.52	10:50:00	19.44	18:50:00	17.76
	3:00:00	19.46	11:00:00	19.53	19:00:00	17.62
	3:10:00	19.41	11:10:00	19.57	19:10:00	17.59
	3:20:00	19.4	11:20:00	19.62	19:20:00	17.48
	3:30:00	19.35	11:30:00	19.73	19:30:00	17.39
	3:40:00	19.31	11:40:00	19.77	19:40:00	17.32
	3:50:00	19.27	11:50:00	19.97	19:50:00	17.23
	4:00:00	19.26	12:00:00	20.08	20:00:00	17.17
	4:10:00	19.21	12:10:00	20.23	20:10:00	17.06
	4:20:00	19.18	12:20:00	20.26	20:20:00	16.95
	4:30:00	19.13	12:30:00	21.34	20:30:00	16.93
	4:40:00	19.09	12:40:00	21.28	20:40:00	16.82
	4:50:00	19.09	12:50:00	21.46	20:50:00	16.82
	5:00:00	19.03	13:00:00	21.42	21:00:00	16.77
	5:10:00	18.98	13:10:00	21.42	21:10:00	16.78
	5:20:00	18.94	13:20:00	21.48	21:20:00	16.78
	5:30:00	18.92	13:30:00	21.58	21:30:00	16.8
	5:40:00	18.9	13:40:00	21.73	21:40:00	17
	5:50:00	18.89	13:50:00	21.53	21:50:00	17.7
	6:00:00	18.82	14:00:00	21.72	22:00:00	18.33
	6:10:00	18.82	14:10:00	21.88	22:10:00	18.81
	6:20:00	18.82	14:20:00	21.96	22:20:00	19.2
	6:30:00	18.78	14:30:00	22.03	22:30:00	19.53
	6:40:00	18.71	14:40:00	22.1	22:40:00	19.79
	6:50:00	18.7	14:50:00	22.17	22:50:00	19.97
	7:00:00	18.73	15:00:00	22.17	23:00:00	20.12
	7:10:00	18.66	15:10:00	21.87	23:10:00	20.23
	7:20:00	18.66	15:20:00	20.49	23:20:00	20.34
	7:30:00	18.68	15:30:00	19.75	23:30:00	20.4
	7:40:00	18.63	15:40:00	19.55	23:40:00	20.49
	7:50:00	18.63	15:50:00	19.29	23:50:00	20.51



## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/9/2008	0:00:00	20.57	8:00:00	19.77	16:00:00	18.72
	0:10:00	20.56	8:10:00	19.52	16:10:00	18.77
	0:20:00	20.59	8:20:00	19.62	16:20:00	18.83
	0:30:00	20.59	8:30:00	19.63	16:30:00	18.77
	0:40:00	20.59	8:40:00	19.79	16:40:00	18.81
	0:50:00	20.59	8:50:00	19.78	16:50:00	18.79
	1:00:00	20.59	9:00:00	19.24	17:00:00	18.77
	1:10:00	20.57	9:10:00	17.9	17:10:00	18.68
	1:20:00	20.56	9:20:00	17.31	17:20:00	18.68
	1:30:00	20.56	9:30:00	17.22	17:30:00	18.55
	1:40:00	20.59	9:40:00	17.15	17:40:00	18.5
	1:50:00	20.56	9:50:00	17	17:50:00	18.42
	2:00:00	20.58	10:00:00	16.93	18:00:00	18.42
	2:10:00	20.55	10:10:00	16.93	18:10:00	18.29
	2:20:00	20.55	10:20:00	16.82	18:20:00	18.2
	2:30:00	20.51	10:30:00	16.82	18:30:00	18.13
	2:40:00	20.5	10:40:00	16.91	18:40:00	18.08
	2:50:00	20.49	10:50:00	16.95	18:50:00	17.96
	3:00:00	20.47	11:00:00	17.08	19:00:00	17.87
	3:10:00	20.45	11:10:00	17.01	19:10:00	17.78
	3:20:00	20.45	11:20:00	16.98	19:20:00	17.67
	3:30:00	20.38	11:30:00	17.06	19:30:00	17.61
	3:40:00	20.39	11:40:00	17.19	19:40:00	17.52
	3:50:00	20.38	11:50:00	17.23	19:50:00	17.43
	4:00:00	20.36	12:00:00	17.29	20:00:00	17.32
	4:10:00	20.32	12:10:00	17.46	20:10:00	17.24
	4:20:00	20.29	12:20:00	17.49	20:20:00	17.19
	4:30:00	20.32	12:30:00	18.63	20:30:00	17.15
	4:40:00	20.25	12:40:00	18.39	20:40:00	17.06
	4:50:00	20.25	12:50:00	18.06	20:50:00	17.04
	5:00:00	20.2	13:00:00	18.51	21:00:00	16.98
	5:10:00	20.19	13:10:00	18.93	21:10:00	16.95
	5:20:00	20.12	13:20:00	18.2	21:20:00	16.9
	5:30:00	20.12	13:30:00	19.06	21:30:00	16.91
	5:40:00	20.1	13:40:00	19.04	21:40:00	16.84
	5:50:00	20.05	13:50:00	18.25	21:50:00	16.87
	6:00:00	20.03	14:00:00	18.22	22:00:00	16.84
	6:10:00	19.99	14:10:00	18.31	22:10:00	16.84
	6:20:00	19.97	14:20:00	18.42	22:20:00	16.84
	6:30:00	19.95	14:30:00	18.44	22:30:00	16.86
6:40:00	19.9	14:40:00	18.48	22:40:00	16.84	
6:50:00	19.84	14:50:00	18.53	22:50:00	16.82	
7:00:00	19.86	15:00:00	18.57	23:00:00	16.86	
7:10:00	19.85	15:10:00	18.57	23:10:00	16.84	
7:20:00	19.78	15:20:00	18.57	23:20:00	16.82	
7:30:00	19.79	15:30:00	18.68	23:30:00	16.8	
7:40:00	19.77	15:40:00	18.74	23:40:00	16.76	
7:50:00	19.77	15:50:00	18.72	23:50:00	16.73	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/10/2008	0:00:00	16.67	8:00:00	20.29	16:00:00	18.33
	0:10:00	16.68	8:10:00	20.31	16:10:00	18.22
	0:20:00	16.58	8:20:00	20.23	16:20:00	18.11
	0:30:00	16.52	8:30:00	20.27	16:30:00	18.05
	0:40:00	16.47	8:40:00	20.34	16:40:00	17.98
	0:50:00	16.47	8:50:00	20.29	16:50:00	17.89
	1:00:00	16.43	9:00:00	20.36	17:00:00	17.81
	1:10:00	16.41	9:10:00	20.4	17:10:00	17.76
	1:20:00	16.39	9:20:00	20.45	17:20:00	17.76
	1:30:00	16.36	9:30:00	20.49	17:30:00	17.83
	1:40:00	16.36	9:40:00	20.47	17:40:00	17.81
	1:50:00	16.36	9:50:00	20.49	17:50:00	17.85
	2:00:00	16.39	10:00:00	20.53	18:00:00	17.84
	2:10:00	16.45	10:10:00	20.64	18:10:00	17.84
	2:20:00	16.63	10:20:00	20.69	18:20:00	17.86
	2:30:00	17.26	10:30:00	20.71	18:30:00	17.84
	2:40:00	17.89	10:40:00	20.73	18:40:00	17.9
	2:50:00	18.37	10:50:00	20.82	18:50:00	17.96
	3:00:00	18.79	11:00:00	20.93	19:00:00	17.98
	3:10:00	19.07	11:10:00	21.06	19:10:00	17.96
	3:20:00	19.36	11:20:00	21.21	19:20:00	18.22
	3:30:00	19.57	11:30:00	21.39	19:30:00	18.72
	3:40:00	19.76	11:40:00	21.53	19:40:00	19.22
	3:50:00	19.88	11:50:00	21.63	19:50:00	19.68
	4:00:00	20.01	12:00:00	21.76	20:00:00	20.03
	4:10:00	20.08	12:10:00	21.91	20:10:00	20.19
	4:20:00	20.18	12:20:00	22.02	20:20:00	20.51
	4:30:00	20.23	12:30:00	22.17	20:30:00	20.69
	4:40:00	20.28	12:40:00	22.28	20:40:00	20.82
	4:50:00	20.28	12:50:00	22.43	20:50:00	20.99
	5:00:00	20.31	13:00:00	22.57	21:00:00	21.02
	5:10:00	20.32	13:10:00	22.68	21:10:00	21.1
	5:20:00	20.29	13:20:00	22.83	21:20:00	21.17
	5:30:00	20.27	13:30:00	22.98	21:30:00	21.12
	5:40:00	20.32	13:40:00	22.96	21:40:00	21.12
	5:50:00	20.32	13:50:00	23	21:50:00	21.12
	6:00:00	20.32	14:00:00	22.89	22:00:00	21.17
	6:10:00	20.34	14:10:00	21.26	22:10:00	21.13
	6:20:00	20.29	14:20:00	19.75	22:20:00	21.12
	6:30:00	20.32	14:30:00	19.42	22:30:00	21.09
	6:40:00	20.29	14:40:00	19.14	22:40:00	21.04
	6:50:00	20.26	14:50:00	19.01	22:50:00	21.04
	7:00:00	20.29	15:00:00	18.94	23:00:00	21.02
	7:10:00	20.29	15:10:00	18.92	23:10:00	20.99
	7:20:00	20.26	15:20:00	18.92	23:20:00	20.96
	7:30:00	20.29	15:30:00	18.79	23:30:00	20.97
	7:40:00	20.29	15:40:00	18.57	23:40:00	20.94
	7:50:00	20.27	15:50:00	18.44	23:50:00	20.95

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/11/2008	0:00:00	20.95	8:00:00	19.67	16:00:00	18.5
	0:10:00	20.93	8:10:00	19.4	16:10:00	18.57
	0:20:00	20.91	8:20:00	19.57	16:20:00	18.44
	0:30:00	20.86	8:30:00	19.5	16:30:00	18.26
	0:40:00	20.8	8:40:00	19.67	16:40:00	18.15
	0:50:00	20.8	8:50:00	19.66	16:50:00	18.07
	1:00:00	20.8	9:00:00	19.66	17:00:00	18.05
	1:10:00	20.78	9:10:00	19.69	17:10:00	18.05
	1:20:00	20.75	9:20:00	19.72	17:20:00	17.98
	1:30:00	20.71	9:30:00	19.76	17:30:00	17.96
	1:40:00	20.69	9:40:00	19.71	17:40:00	17.98
	1:50:00	20.64	9:50:00	19.73	17:50:00	17.94
	2:00:00	20.62	10:00:00	19.84	18:00:00	18.02
	2:10:00	20.62	10:10:00	19.95	18:10:00	18.05
	2:20:00	20.6	10:20:00	20.03	18:20:00	18.09
	2:30:00	20.58	10:30:00	20.05	18:30:00	18.2
	2:40:00	20.56	10:40:00	20.19	18:40:00	18.22
	2:50:00	20.53	10:50:00	20.27	18:50:00	18.29
	3:00:00	20.56	11:00:00	20.36	19:00:00	18.26
	3:10:00	20.53	11:10:00	20.53	19:10:00	18.31
	3:20:00	20.47	11:20:00	20.58	19:20:00	18.24
	3:30:00	20.4	11:30:00	20.73	19:30:00	18.15
	3:40:00	20.45	11:40:00	20.84	19:40:00	18.09
	3:50:00	20.4	11:50:00	20.99	19:50:00	18
	4:00:00	20.36	12:00:00	21.17	20:00:00	18.02
	4:10:00	20.34	12:10:00	21.32	20:10:00	18.35
	4:20:00	20.32	12:20:00	21.5	20:20:00	18.79
	4:30:00	20.29	12:30:00	21.67	20:30:00	19.22
	4:40:00	20.23	12:40:00	21.78	20:40:00	19.57
	4:50:00	20.21	12:50:00	21.98	20:50:00	19.77
	5:00:00	20.19	13:00:00	22.13	21:00:00	20.01
	5:10:00	20.19	13:10:00	22.3	21:10:00	20.16
	5:20:00	20.14	13:20:00	22.43	21:20:00	20.31
	5:30:00	20.12	13:30:00	22.52	21:30:00	20.37
	5:40:00	20.03	13:40:00	22.61	21:40:00	20.46
	5:50:00	20.01	13:50:00	22.74	21:50:00	20.53
	6:00:00	19.99	14:00:00	22.72	22:00:00	20.56
	6:10:00	19.95	14:10:00	22.68	22:10:00	20.58
	6:20:00	19.92	14:20:00	22.02	22:20:00	20.57
	6:30:00	19.92	14:30:00	20.47	22:30:00	20.56
6:40:00	19.88	14:40:00	19.75	22:40:00	20.53	
6:50:00	19.86	14:50:00	19.4	22:50:00	20.53	
7:00:00	19.81	15:00:00	19.03	23:00:00	20.51	
7:10:00	19.79	15:10:00	18.96	23:10:00	20.51	
7:20:00	19.77	15:20:00	18.88	23:20:00	20.47	
7:30:00	19.76	15:30:00	18.74	23:30:00	20.47	
7:40:00	19.74	15:40:00	18.61	23:40:00	20.49	
7:50:00	19.69	15:50:00	18.55	23:50:00	20.45	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/12/2008	0:00:00	20.38	8:00:00	18.86	16:00:00	19.99
	0:10:00	20.32	8:10:00	18.57	16:10:00	20.27
	0:20:00	20.34	8:20:00	18.65	16:20:00	20.56
	0:30:00	20.27	8:30:00	18.64	16:30:00	20.71
	0:40:00	20.23	8:40:00	18.8	16:40:00	20.86
	0:50:00	20.23	8:50:00	18.93	16:50:00	21.08
	1:00:00	20.21	9:00:00	18.96	17:00:00	21.5
	1:10:00	20.14	9:10:00	19.05	17:10:00	22.47
	1:20:00	20.13	9:20:00	19.1	17:20:00	23.18
	1:30:00	20.12	9:30:00	19.21	17:30:00	23.51
	1:40:00	20.08	9:40:00	19.26	17:40:00	23.35
	1:50:00	20.03	9:50:00	19.37	17:50:00	22.04
	2:00:00	20.01	10:00:00	19.43	18:00:00	20.86
	2:10:00	19.95	10:10:00	19.49	18:10:00	20.12
	2:20:00	19.95	10:20:00	19.6	18:20:00	19.62
	2:30:00	19.92	10:30:00	19.68	18:30:00	19.22
	2:40:00	19.86	10:40:00	19.84	18:40:00	18.92
	2:50:00	19.84	10:50:00	19.95	18:50:00	18.59
	3:00:00	19.79	11:00:00	20.08	19:00:00	18.35
	3:10:00	19.75	11:10:00	20.19	19:10:00	18.08
	3:20:00	19.75	11:20:00	20.19	19:20:00	17.83
	3:30:00	19.64	11:30:00	20.29	19:30:00	17.6
	3:40:00	19.64	11:40:00	20.43	19:40:00	17.39
	3:50:00	19.6	11:50:00	20.49	19:50:00	17.22
	4:00:00	19.59	12:00:00	20.03	20:00:00	17.11
	4:10:00	19.59	12:10:00	18.63	20:10:00	17.06
	4:20:00	19.51	12:20:00	18.07	20:20:00	16.98
	4:30:00	19.45	12:30:00	17.96	20:30:00	16.95
	4:40:00	19.44	12:40:00	17.87	20:40:00	16.95
	4:50:00	19.38	12:50:00	17.91	20:50:00	16.93
	5:00:00	19.41	13:00:00	17.87	21:00:00	16.95
	5:10:00	19.3	13:10:00	18.48	21:10:00	17
	5:20:00	19.27	13:20:00	18.49	21:20:00	16.95
	5:30:00	19.14	13:30:00	18.51	21:30:00	16.95
	5:40:00	19.18	13:40:00	18.43	21:40:00	16.95
	5:50:00	19.16	13:50:00	18.34	21:50:00	16.95
	6:00:00	19.13	14:00:00	17.9	22:00:00	17.12
	6:10:00	19.08	14:10:00	17.9	22:10:00	17.47
	6:20:00	19.03	14:20:00	17.9	22:20:00	17.9
	6:30:00	19.01	14:30:00	18.01	22:30:00	18.29
	6:40:00	18.98	14:40:00	18.11	22:40:00	18.66
	6:50:00	18.92	14:50:00	18.24	22:50:00	18.9
	7:00:00	18.9	15:00:00	18.46	23:00:00	19.14
	7:10:00	18.9	15:10:00	18.68	23:10:00	19.36
	7:20:00	18.85	15:20:00	18.9	23:20:00	19.51
	7:30:00	18.81	15:30:00	19.29	23:30:00	19.66
	7:40:00	18.85	15:40:00	19.49	23:40:00	19.73
	7:50:00	18.81	15:50:00	19.73	23:50:00	19.84

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/13/2008	0:00:00	19.91	8:00:00	19.41	16:00:00	18.48
	0:10:00	19.95	8:10:00	19.46	16:10:00	18.48
	0:20:00	19.99	8:20:00	19.44	16:20:00	18.66
	0:30:00	20.05	8:30:00	19.49	16:30:00	18.7
	0:40:00	20.05	8:40:00	19.53	16:40:00	18.77
	0:50:00	20.1	8:50:00	19.55	16:50:00	18.83
	1:00:00	20.12	9:00:00	19.6	17:00:00	18.88
	1:10:00	20.11	9:10:00	19.68	17:10:00	18.92
	1:20:00	20.09	9:20:00	19.79	17:20:00	18.96
	1:30:00	20.1	9:30:00	19.84	17:30:00	19.03
	1:40:00	20.12	9:40:00	19.92	17:40:00	19.05
	1:50:00	20.12	9:50:00	20.05	17:50:00	19.05
	2:00:00	20.08	10:00:00	20.12	18:00:00	19.03
	2:10:00	20.05	10:10:00	20.22	18:10:00	19.12
	2:20:00	20.05	10:20:00	20.32	18:20:00	19.31
	2:30:00	20.04	10:30:00	20.45	18:30:00	19.57
	2:40:00	20.03	10:40:00	20.58	18:40:00	19.9
	2:50:00	20.03	10:50:00	20.73	18:50:00	20.21
	3:00:00	19.99	11:00:00	20.88	19:00:00	20.49
	3:10:00	19.99	11:10:00	21.06	19:10:00	20.75
	3:20:00	19.97	11:20:00	21.11	19:20:00	20.99
	3:30:00	19.97	11:30:00	21.21	19:30:00	21.17
	3:40:00	19.95	11:40:00	21.32	19:40:00	21.28
	3:50:00	19.91	11:50:00	21.52	19:50:00	21.32
	4:00:00	19.85	12:00:00	21.58	20:00:00	21.5
	4:10:00	19.84	12:10:00	21.77	20:10:00	21.54
	4:20:00	19.84	12:20:00	22.02	20:20:00	21.63
	4:30:00	19.81	12:30:00	22	20:30:00	21.63
	4:40:00	19.79	12:40:00	22.22	20:40:00	21.63
	4:50:00	19.81	12:50:00	22.33	20:50:00	21.67
	5:00:00	19.75	13:00:00	22.26	21:00:00	21.69
	5:10:00	19.71	13:10:00	21.02	21:10:00	21.63
	5:20:00	19.68	13:20:00	19.2	21:20:00	21.65
	5:30:00	19.65	13:30:00	18.77	21:30:00	21.58
	5:40:00	19.69	13:40:00	18.66	21:40:00	21.61
	5:50:00	19.63	13:50:00	18.63	21:50:00	21.58
	6:00:00	19.62	14:00:00	18.55	22:00:00	21.54
	6:10:00	19.56	14:10:00	18.55	22:10:00	21.5
	6:20:00	19.57	14:20:00	18.53	22:20:00	21.52
	6:30:00	19.53	14:30:00	18.55	22:30:00	21.47
6:40:00	19.55	14:40:00	18.55	22:40:00	21.47	
6:50:00	19.49	14:50:00	18.53	22:50:00	21.49	
7:00:00	19.46	15:00:00	18.55	23:00:00	21.45	
7:10:00	19.46	15:10:00	18.59	23:10:00	21.44	
7:20:00	19.44	15:20:00	18.57	23:20:00	21.36	
7:30:00	19.42	15:30:00	18.63	23:30:00	21.41	
7:40:00	19.42	15:40:00	18.57	23:40:00	21.34	
7:50:00	19.44	15:50:00	18.53	23:50:00	21.32	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/14/2008	0:00:00	21.28	8:00:00	20.19	16:00:00	21.54
	0:10:00	21.26	8:10:00	20.21	16:10:00	21.5
	0:20:00	21.21	8:20:00	20.14	16:20:00	21.5
	0:30:00	21.19	8:30:00	20.18	16:30:00	21.47
	0:40:00	21.12	8:40:00	20.16	16:40:00	21.41
	0:50:00	21.12	8:50:00	20.18	16:50:00	21.41
	1:00:00	21.06	9:00:00	20.19	17:00:00	21.32
	1:10:00	21.04	9:10:00	20.23	17:10:00	21.32
	1:20:00	21.04	9:20:00	20.27	17:20:00	21.26
	1:30:00	21.02	9:30:00	20.29	17:30:00	21.26
	1:40:00	20.96	9:40:00	20.36	17:40:00	21.17
	1:50:00	20.93	9:50:00	20.38	17:50:00	21.12
	2:00:00	20.86	10:00:00	20.38	18:00:00	21.08
	2:10:00	20.86	10:10:00	20.45	18:10:00	21.06
	2:20:00	20.88	10:20:00	20.49	18:20:00	21.02
	2:30:00	20.84	10:30:00	20.6	18:30:00	20.95
	2:40:00	20.8	10:40:00	20.71	18:40:00	20.93
	2:50:00	20.78	10:50:00	20.8	18:50:00	20.91
	3:00:00	20.75	11:00:00	20.86	19:00:00	20.82
	3:10:00	20.73	11:10:00	20.97	19:10:00	20.8
	3:20:00	20.71	11:20:00	21.06	19:20:00	20.8
	3:30:00	20.69	11:30:00	21.1	19:30:00	20.78
	3:40:00	20.64	11:40:00	21.19	19:40:00	20.71
	3:50:00	20.62	11:50:00	21.2	19:50:00	20.69
	4:00:00	20.53	12:00:00	21.17	20:00:00	20.67
	4:10:00	20.53	12:10:00	21.26	20:10:00	20.62
	4:20:00	20.56	12:20:00	21.3	20:20:00	20.56
	4:30:00	20.49	12:30:00	21.39	20:30:00	20.56
	4:40:00	20.51	12:40:00	21.52	20:40:00	20.53
	4:50:00	20.47	12:50:00	21.56	20:50:00	20.53
	5:00:00	20.45	13:00:00	21.76	21:00:00	20.47
	5:10:00	20.4	13:10:00	21.76	21:10:00	20.43
	5:20:00	20.38	13:20:00	21.85	21:20:00	20.44
	5:30:00	20.38	13:30:00	21.82	21:30:00	20.38
	5:40:00	20.32	13:40:00	21.91	21:40:00	20.36
	5:50:00	20.32	13:50:00	21.85	21:50:00	20.29
	6:00:00	20.31	14:00:00	21.82	22:00:00	20.27
	6:10:00	20.27	14:10:00	21.85	22:10:00	20.23
	6:20:00	20.21	14:20:00	21.89	22:20:00	20.19
	6:30:00	20.21	14:30:00	21.91	22:30:00	20.12
	6:40:00	20.21	14:40:00	21.79	22:40:00	20.1
	6:50:00	20.16	14:50:00	21.75	22:50:00	19.99
	7:00:00	20.16	15:00:00	21.65	23:00:00	19.97
	7:10:00	20.12	15:10:00	21.74	23:10:00	19.88
	7:20:00	20.12	15:20:00	21.74	23:20:00	19.88
	7:30:00	20.16	15:30:00	21.66	23:30:00	19.84
	7:40:00	20.13	15:40:00	21.61	23:40:00	19.84
	7:50:00	20.16	15:50:00	21.58	23:50:00	19.79

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/15/2008	0:00:00	19.71	8:00:00	19.29	16:00:00	23.3
	0:10:00	19.73	8:10:00	19.33	16:10:00	23.31
	0:20:00	19.73	8:20:00	19.33	16:20:00	23.31
	0:30:00	19.68	8:30:00	19.29	16:30:00	23.35
	0:40:00	19.66	8:40:00	19.1	16:40:00	23.44
	0:50:00	19.66	8:50:00	19.3	16:50:00	23.51
	1:00:00	19.62	9:00:00	19.39	17:00:00	23.53
	1:10:00	19.64	9:10:00	19.46	17:10:00	23.64
	1:20:00	19.62	9:20:00	19.42	17:20:00	23.64
	1:30:00	19.62	9:30:00	19.44	17:30:00	23.53
	1:40:00	19.57	9:40:00	19.51	17:40:00	23.51
	1:50:00	19.61	9:50:00	19.55	17:50:00	23.48
	2:00:00	19.56	10:00:00	19.62	18:00:00	23.46
	2:10:00	19.56	10:10:00	19.62	18:10:00	23.42
	2:20:00	19.55	10:20:00	19.71	18:20:00	23.4
	2:30:00	19.51	10:30:00	19.75	18:30:00	23.33
	2:40:00	19.51	10:40:00	19.86	18:40:00	23.26
	2:50:00	19.49	10:50:00	19.88	18:50:00	23.13
	3:00:00	19.51	11:00:00	19.97	19:00:00	23.05
	3:10:00	19.46	11:10:00	20.05	19:10:00	22.93
	3:20:00	19.46	11:20:00	20.19	19:20:00	22.87
	3:30:00	19.46	11:30:00	20.26	19:30:00	22.7
	3:40:00	19.45	11:40:00	20.37	19:40:00	22.57
	3:50:00	19.45	11:50:00	20.51	19:50:00	22.41
	4:00:00	19.38	12:00:00	20.67	20:00:00	22.24
	4:10:00	19.38	12:10:00	20.78	20:10:00	22.13
	4:20:00	19.36	12:20:00	20.91	20:20:00	22
	4:30:00	19.38	12:30:00	21.1	20:30:00	21.87
	4:40:00	19.36	12:40:00	21.23	20:40:00	21.74
	4:50:00	19.31	12:50:00	21.32	20:50:00	21.69
	5:00:00	19.33	13:00:00	21.56	21:00:00	21.5
	5:10:00	19.33	13:10:00	21.56	21:10:00	21.5
	5:20:00	19.29	13:20:00	21.72	21:20:00	21.34
	5:30:00	19.27	13:30:00	21.93	21:30:00	21.26
	5:40:00	19.22	13:40:00	22.04	21:40:00	21.19
	5:50:00	19.25	13:50:00	22.1	21:50:00	21.06
	6:00:00	19.22	14:00:00	22.35	22:00:00	20.99
	6:10:00	19.2	14:10:00	22.43	22:10:00	20.93
	6:20:00	19.2	14:20:00	22.52	22:20:00	20.82
	6:30:00	19.2	14:30:00	22.59	22:30:00	20.73
6:40:00	19.22	14:40:00	22.68	22:40:00	20.71	
6:50:00	19.25	14:50:00	22.85	22:50:00	20.67	
7:00:00	19.24	15:00:00	22.89	23:00:00	20.58	
7:10:00	19.22	15:10:00	22.92	23:10:00	20.53	
7:20:00	19.22	15:20:00	23	23:20:00	20.47	
7:30:00	19.22	15:30:00	23.01	23:30:00	20.43	
7:40:00	19.27	15:40:00	23.05	23:40:00	20.43	
7:50:00	19.27	15:50:00	23.19	23:50:00	20.34	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/16/2008	0:00:00	20.27	8:00:00	18.94	16:00:00	15.99
	0:10:00	20.27	8:10:00	18.96	16:10:00	16.01
	0:20:00	20.21	8:20:00	19.01	16:20:00	16.1
	0:30:00	20.14	8:30:00	18.96	16:30:00	16.22
	0:40:00	20.05	8:40:00	19.01	16:40:00	16.17
	0:50:00	20.05	8:50:00	19.05	16:50:00	16.01
	1:00:00	19.99	9:00:00	19.01	17:00:00	16.04
	1:10:00	19.97	9:10:00	19.05	17:10:00	16.01
	1:20:00	19.88	9:20:00	19.05	17:20:00	16.04
	1:30:00	19.79	9:30:00	19.05	17:30:00	16.15
	1:40:00	19.77	9:40:00	19.12	17:40:00	16.3
	1:50:00	19.73	9:50:00	19.12	17:50:00	16.39
	2:00:00	19.73	10:00:00	19.2	18:00:00	16.43
	2:10:00	19.66	10:10:00	19.2	18:10:00	16.35
	2:20:00	19.64	10:20:00	19.18	18:20:00	16.32
	2:30:00	19.6	10:30:00	19.17	18:30:00	16.43
	2:40:00	19.55	10:40:00	19.42	18:40:00	16.47
	2:50:00	19.55	10:50:00	19.53	18:50:00	16.47
	3:00:00	19.5	11:00:00	19.62	19:00:00	16.52
	3:10:00	19.49	11:10:00	19.68	19:10:00	16.56
	3:20:00	19.42	11:20:00	19.75	19:20:00	16.49
	3:30:00	19.42	11:30:00	19.79	19:30:00	16.52
	3:40:00	19.33	11:40:00	19.81	19:40:00	16.49
	3:50:00	19.33	11:50:00	19.9	19:50:00	16.49
	4:00:00	19.29	12:00:00	19.95	20:00:00	16.52
	4:10:00	19.25	12:10:00	19.99	20:10:00	16.48
	4:20:00	19.22	12:20:00	20.16	20:20:00	16.46
	4:30:00	19.22	12:30:00	20.14	20:30:00	16.47
	4:40:00	19.2	12:40:00	20.23	20:40:00	16.45
	4:50:00	19.2	12:50:00	20.32	20:50:00	16.63
	5:00:00	19.14	13:00:00	20.23	21:00:00	16.86
	5:10:00	19.12	13:10:00	20.03	21:10:00	17.22
	5:20:00	19.12	13:20:00	18.53	21:20:00	17.48
	5:30:00	19.07	13:30:00	17.38	21:30:00	17.67
	5:40:00	19.07	13:40:00	17.08	21:40:00	17.94
	5:50:00	19.01	13:50:00	16.87	21:50:00	18.05
	6:00:00	19.03	14:00:00	16.68	22:00:00	18.14
	6:10:00	18.98	14:10:00	16.56	22:10:00	18.22
	6:20:00	18.96	14:20:00	16.4	22:20:00	18.33
	6:30:00	18.96	14:30:00	16.29	22:30:00	18.34
	6:40:00	18.91	14:40:00	16.23	22:40:00	18.37
	6:50:00	18.96	14:50:00	16.19	22:50:00	18.39
	7:00:00	18.92	15:00:00	16.09	23:00:00	18.39
	7:10:00	18.9	15:10:00	16.06	23:10:00	18.44
	7:20:00	18.9	15:20:00	16.01	23:20:00	18.37
	7:30:00	18.88	15:30:00	15.98	23:30:00	18.42
	7:40:00	18.96	15:40:00	15.97	23:40:00	18.42
	7:50:00	18.94	15:50:00	15.97	23:50:00	18.39



## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/17/2008	0:00:00	18.39	8:00:00	18.24	16:00:00	18.92
	0:10:00	18.42	8:10:00	18.2	16:10:00	18.91
	0:20:00	18.37	8:20:00	18.2	16:20:00	18.91
	0:30:00	18.39	8:30:00	18.24	16:30:00	18.96
	0:40:00	18.42	8:40:00	18.29	16:40:00	18.91
	0:50:00	18.35	8:50:00	18.22	16:50:00	18.83
	1:00:00	18.37	9:00:00	18.29	17:00:00	18.73
	1:10:00	18.37	9:10:00	18.31	17:10:00	18.73
	1:20:00	18.39	9:20:00	18.31	17:20:00	18.8
	1:30:00	18.37	9:30:00	18.35	17:30:00	18.82
	1:40:00	18.35	9:40:00	18.33	17:40:00	18.74
	1:50:00	18.31	9:50:00	18.35	17:50:00	18.7
	2:00:00	18.33	10:00:00	18.37	18:00:00	18.68
	2:10:00	18.33	10:10:00	18.35	18:10:00	18.74
	2:20:00	18.31	10:20:00	18.35	18:20:00	18.72
	2:30:00	18.31	10:30:00	18.35	18:30:00	18.68
	2:40:00	18.29	10:40:00	18.44	18:40:00	18.62
	2:50:00	18.26	10:50:00	18.46	18:50:00	18.59
	3:00:00	18.26	11:00:00	18.44	19:00:00	18.59
	3:10:00	18.26	11:10:00	18.44	19:10:00	18.49
	3:20:00	18.22	11:20:00	18.41	19:20:00	18.45
	3:30:00	18.26	11:30:00	18.5	19:30:00	18.33
	3:40:00	18.25	11:40:00	18.53	19:40:00	18.26
	3:50:00	18.23	11:50:00	18.52	19:50:00	18.22
	4:00:00	18.2	12:00:00	18.52	20:00:00	18.11
	4:10:00	18.19	12:10:00	18.42	20:10:00	18.1
	4:20:00	18.18	12:20:00	18.38	20:20:00	18.05
	4:30:00	18.15	12:30:00	18.37	20:30:00	18
	4:40:00	18.15	12:40:00	18.17	20:40:00	17.98
	4:50:00	18.11	12:50:00	18.6	20:50:00	17.91
	5:00:00	18.11	13:00:00	18.49	21:00:00	17.85
	5:10:00	18.11	13:10:00	18.56	21:10:00	17.83
	5:20:00	18.11	13:20:00	18.54	21:20:00	17.77
	5:30:00	18.09	13:30:00	18.57	21:30:00	17.66
	5:40:00	18.09	13:40:00	18.63	21:40:00	17.65
	5:50:00	18.09	13:50:00	18.61	21:50:00	17.65
	6:00:00	18.11	14:00:00	18.61	22:00:00	17.54
	6:10:00	18.11	14:10:00	18.68	22:10:00	17.52
	6:20:00	18.11	14:20:00	18.68	22:20:00	17.46
	6:30:00	18.13	14:30:00	18.79	22:30:00	17.43
	6:40:00	18.14	14:40:00	18.79	22:40:00	17.37
	6:50:00	18.15	14:50:00	18.83	22:50:00	17.26
	7:00:00	18.18	15:00:00	18.83	23:00:00	17.32
	7:10:00	18.18	15:10:00	18.92	23:10:00	17.17
	7:20:00	18.18	15:20:00	18.88	23:20:00	17.24
	7:30:00	18.2	15:30:00	18.86	23:30:00	17.24
	7:40:00	18.19	15:40:00	18.9	23:40:00	17.18
	7:50:00	18.2	15:50:00	18.95	23:50:00	17.19

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/18/2008	0:00:00	17.17	8:00:00	16.12	16:00:00	16.25
	0:10:00	17.15	8:10:00	16.08	16:10:00	16.17
	0:20:00	17.04	8:20:00	16.1	16:20:00	16.16
	0:30:00	17.11	8:30:00	16.08	16:30:00	16.09
	0:40:00	17.04	8:40:00	16.06	16:40:00	16.08
	0:50:00	17.06	8:50:00	16.08	16:50:00	16.06
	1:00:00	17.06	9:00:00	16.1	17:00:00	16.15
	1:10:00	17.04	9:10:00	16.18	17:10:00	16.19
	1:20:00	17.02	9:20:00	16.2	17:20:00	16.19
	1:30:00	16.95	9:30:00	16.08	17:30:00	16.22
	1:40:00	16.98	9:40:00	16.09	17:40:00	16.3
	1:50:00	16.98	9:50:00	16.43	17:50:00	16.36
	2:00:00	16.93	10:00:00	16.39	18:00:00	16.33
	2:10:00	16.98	10:10:00	16.47	18:10:00	16.45
	2:20:00	16.89	10:20:00	16.55	18:20:00	16.69
	2:30:00	16.89	10:30:00	16.59	18:30:00	16.91
	2:40:00	16.89	10:40:00	16.66	18:40:00	17.1
	2:50:00	16.84	10:50:00	16.83	18:50:00	17.22
	3:00:00	16.84	11:00:00	16.96	19:00:00	17.32
	3:10:00	16.82	11:10:00	17.04	19:10:00	17.41
	3:20:00	16.81	11:20:00	17.24	19:20:00	17.43
	3:30:00	16.79	11:30:00	17.3	19:30:00	17.48
	3:40:00	16.78	11:40:00	17.41	19:40:00	17.52
	3:50:00	16.71	11:50:00	17.59	19:50:00	17.54
	4:00:00	16.6	12:00:00	17.78	20:00:00	17.52
	4:10:00	16.67	12:10:00	17.89	20:10:00	17.52
	4:20:00	16.63	12:20:00	17.94	20:20:00	17.5
	4:30:00	16.63	12:30:00	18.07	20:30:00	17.48
	4:40:00	16.63	12:40:00	18.29	20:40:00	17.48
	4:50:00	16.54	12:50:00	18.42	20:50:00	17.5
	5:00:00	16.52	13:00:00	18.55	21:00:00	17.39
	5:10:00	16.45	13:10:00	18.63	21:10:00	17.36
	5:20:00	16.41	13:20:00	18.61	21:20:00	17.35
	5:30:00	16.45	13:30:00	18.63	21:30:00	17.3
	5:40:00	16.41	13:40:00	18.74	21:40:00	17.23
	5:50:00	16.41	13:50:00	18.7	21:50:00	17.22
	6:00:00	16.37	14:00:00	18.77	22:00:00	17.19
	6:10:00	16.27	14:10:00	18.81	22:10:00	17.15
	6:20:00	16.35	14:20:00	18.83	22:20:00	17.08
	6:30:00	16.33	14:30:00	18.7	22:30:00	17.02
	6:40:00	16.28	14:40:00	18.57	22:40:00	17
	6:50:00	16.27	14:50:00	18.22	22:50:00	16.98
	7:00:00	16.2	15:00:00	17.28	23:00:00	16.95
	7:10:00	16.22	15:10:00	16.82	23:10:00	16.91
	7:20:00	16.15	15:20:00	16.65	23:20:00	16.86
	7:30:00	16.1	15:30:00	16.58	23:30:00	16.84
	7:40:00	16.08	15:40:00	16.36	23:40:00	16.78
	7:50:00	16.06	15:50:00	16.32	23:50:00	16.73

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/19/2008	0:00:00	16.71	8:00:00	15.72	16:00:00	20.47
	0:10:00	16.6	8:10:00	15.72	16:10:00	20.51
	0:20:00	16.66	8:20:00	15.76	16:20:00	20.68
	0:30:00	16.63	8:30:00	15.58	16:30:00	20.73
	0:40:00	16.61	8:40:00	15.83	16:40:00	20.75
	0:50:00	16.54	8:50:00	15.89	16:50:00	20.73
	1:00:00	16.47	9:00:00	15.88	17:00:00	20.71
	1:10:00	16.44	9:10:00	15.94	17:10:00	20.69
	1:20:00	16.45	9:20:00	15.97	17:20:00	20.71
	1:30:00	16.4	9:30:00	15.99	17:30:00	20.73
	1:40:00	16.34	9:40:00	16.06	17:40:00	20.73
	1:50:00	16.36	9:50:00	16.12	17:50:00	20.58
	2:00:00	16.25	10:00:00	16.25	18:00:00	20.49
	2:10:00	16.27	10:10:00	16.25	18:10:00	20.4
	2:20:00	16.24	10:20:00	16.34	18:20:00	20.25
	2:30:00	16.24	10:30:00	16.41	18:30:00	20.16
	2:40:00	16.2	10:40:00	16.46	18:40:00	20.05
	2:50:00	16.21	10:50:00	16.49	18:50:00	19.95
	3:00:00	16.1	11:00:00	16.61	19:00:00	19.86
	3:10:00	16.12	11:10:00	16.6	19:10:00	19.73
	3:20:00	16.15	11:20:00	16.69	19:20:00	19.75
	3:30:00	16.1	11:30:00	16.76	19:30:00	19.64
	3:40:00	16.09	11:40:00	16.82	19:40:00	19.55
	3:50:00	16.05	11:50:00	16.79	19:50:00	19.51
	4:00:00	16.01	12:00:00	17.04	20:00:00	19.33
	4:10:00	15.97	12:10:00	17.17	20:10:00	19.2
	4:20:00	15.97	12:20:00	17.28	20:20:00	19.14
	4:30:00	15.97	12:30:00	17.39	20:30:00	18.98
	4:40:00	15.95	12:40:00	17.5	20:40:00	18.92
	4:50:00	15.88	12:50:00	17.65	20:50:00	18.81
	5:00:00	15.86	13:00:00	17.87	21:00:00	18.7
	5:10:00	15.73	13:10:00	18	21:10:00	18.61
	5:20:00	15.8	13:20:00	18.18	21:20:00	18.48
	5:30:00	15.71	13:30:00	18.24	21:30:00	18.39
	5:40:00	15.74	13:40:00	18.35	21:40:00	18.29
	5:50:00	15.76	13:50:00	18.59	21:50:00	18.2
	6:00:00	15.75	14:00:00	18.68	22:00:00	18.09
	6:10:00	15.7	14:10:00	18.9	22:10:00	17.98
	6:20:00	15.69	14:20:00	19.03	22:20:00	17.96
	6:30:00	15.68	14:30:00	19.18	22:30:00	17.85
	6:40:00	15.66	14:40:00	19.33	22:40:00	17.76
	6:50:00	15.62	14:50:00	19.46	22:50:00	17.74
	7:00:00	15.58	15:00:00	19.6	23:00:00	17.67
	7:10:00	15.65	15:10:00	19.81	23:10:00	17.59
	7:20:00	15.62	15:20:00	19.95	23:20:00	17.52
	7:30:00	15.65	15:30:00	20.1	23:30:00	17.48
	7:40:00	15.64	15:40:00	20.16	23:40:00	17.41
	7:50:00	15.66	15:50:00	20.36	23:50:00	17.37

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/20/2008	0:00:00	17.28	8:00:00	15.64	16:00:00	17.83
	0:10:00	17.24	8:10:00	15.46	16:10:00	18
	0:20:00	17.22	8:20:00	15.45	16:20:00	18.22
	0:30:00	17.15	8:30:00	15.65	16:30:00	18.37
	0:40:00	17.08	8:40:00	15.8	16:40:00	18.57
	0:50:00	17.02	8:50:00	15.84	16:50:00	18.81
	1:00:00	17.02	9:00:00	15.83	17:00:00	18.98
	1:10:00	16.96	9:10:00	15.94	17:10:00	19.12
	1:20:00	16.89	9:20:00	16.03	17:20:00	19.31
	1:30:00	16.84	9:30:00	16.15	17:30:00	19.42
	1:40:00	16.77	9:40:00	16.21	17:40:00	19.53
	1:50:00	16.77	9:50:00	16.23	17:50:00	19.71
	2:00:00	16.73	10:00:00	16.3	18:00:00	19.77
	2:10:00	16.67	10:10:00	16.39	18:10:00	19.9
	2:20:00	16.63	10:20:00	16.56	18:20:00	20
	2:30:00	16.58	10:30:00	16.71	18:30:00	20.16
	2:40:00	16.53	10:40:00	16.77	18:40:00	20.24
	2:50:00	16.49	10:50:00	16.89	18:50:00	20.36
	3:00:00	16.47	11:00:00	17.15	19:00:00	20.43
	3:10:00	16.41	11:10:00	17.28	19:10:00	20.45
	3:20:00	16.36	11:20:00	17.46	19:20:00	20.43
	3:30:00	16.35	11:30:00	17.65	19:30:00	20.43
	3:40:00	16.35	11:40:00	17.81	19:40:00	20.34
	3:50:00	16.34	11:50:00	17.94	19:50:00	20.27
	4:00:00	16.24	12:00:00	18.18	20:00:00	20.19
	4:10:00	16.24	12:10:00	18.31	20:10:00	20.08
	4:20:00	16.24	12:20:00	18.39	20:20:00	19.99
	4:30:00	16.17	12:30:00	18.44	20:30:00	19.95
	4:40:00	16.12	12:40:00	18.39	20:40:00	19.86
	4:50:00	16.04	12:50:00	18.53	20:50:00	19.77
	5:00:00	16.06	13:00:00	18.5	21:00:00	19.73
	5:10:00	16.04	13:10:00	18.33	21:10:00	19.64
	5:20:00	16.01	13:20:00	17.22	21:20:00	19.52
	5:30:00	16.01	13:30:00	16.71	21:30:00	19.44
	5:40:00	15.97	13:40:00	16.8	21:40:00	19.36
	5:50:00	15.93	13:50:00	16.76	21:50:00	19.31
	6:00:00	15.93	14:00:00	16.71	22:00:00	19.2
	6:10:00	15.88	14:10:00	16.71	22:10:00	19.16
	6:20:00	15.86	14:20:00	16.76	22:20:00	19.07
	6:30:00	15.77	14:30:00	16.82	22:30:00	19.03
	6:40:00	15.8	14:40:00	16.93	22:40:00	18.96
	6:50:00	15.75	14:50:00	17.02	22:50:00	18.88
	7:00:00	15.73	15:00:00	17.11	23:00:00	18.81
	7:10:00	15.7	15:10:00	17.11	23:10:00	18.77
	7:20:00	15.69	15:20:00	17.19	23:20:00	18.68
	7:30:00	15.69	15:30:00	17.25	23:30:00	18.61
	7:40:00	15.66	15:40:00	17.43	23:40:00	18.55
	7:50:00	15.66	15:50:00	17.61	23:50:00	18.48

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/21/2008	0:00:00	18.44	8:00:00	16.45	16:00:00	18.94
	0:10:00	18.34	8:10:00	16.24	16:10:00	19.08
	0:20:00	18.33	8:20:00	16.36	16:20:00	19.29
	0:30:00	18.26	8:30:00	16.49	16:30:00	19.51
	0:40:00	18.22	8:40:00	16.56	16:40:00	19.42
	0:50:00	18.13	8:50:00	16.59	16:50:00	19.6
	1:00:00	18.11	9:00:00	16.68	17:00:00	19.88
	1:10:00	18.07	9:10:00	16.72	17:10:00	19.97
	1:20:00	18	9:20:00	16.82	17:20:00	20.1
	1:30:00	17.94	9:30:00	16.93	17:30:00	20.21
	1:40:00	17.94	9:40:00	17	17:40:00	20.19
	1:50:00	17.89	9:50:00	17.11	17:50:00	20.23
	2:00:00	17.83	10:00:00	17.19	18:00:00	20.4
	2:10:00	17.79	10:10:00	17.32	18:10:00	20.95
	2:20:00	17.74	10:20:00	17.41	18:20:00	21.58
	2:30:00	17.72	10:30:00	17.54	18:30:00	21.67
	2:40:00	17.7	10:40:00	17.67	18:40:00	20.46
	2:50:00	17.63	10:50:00	17.72	18:50:00	19.25
	3:00:00	17.61	11:00:00	17.76	19:00:00	18.71
	3:10:00	17.52	11:10:00	18.05	19:10:00	18.31
	3:20:00	17.5	11:20:00	18.18	19:20:00	18.02
	3:30:00	17.37	11:30:00	18.31	19:30:00	17.83
	3:40:00	17.43	11:40:00	18.46	19:40:00	17.7
	3:50:00	17.35	11:50:00	18.63	19:50:00	17.51
	4:00:00	17.35	12:00:00	18.72	20:00:00	17.47
	4:10:00	17.28	12:10:00	18.96	20:10:00	17.43
	4:20:00	17.22	12:20:00	19.2	20:20:00	17.35
	4:30:00	17.19	12:30:00	19.44	20:30:00	17.28
	4:40:00	17.11	12:40:00	19.57	20:40:00	17.28
	4:50:00	17.08	12:50:00	19.77	20:50:00	17.19
	5:00:00	17	13:00:00	20.86	21:00:00	17.22
	5:10:00	16.87	13:10:00	19.79	21:10:00	17.13
	5:20:00	16.91	13:20:00	19.25	21:20:00	17.13
	5:30:00	16.91	13:30:00	17.89	21:30:00	17.11
	5:40:00	16.82	13:40:00	17.58	21:40:00	17.08
	5:50:00	16.82	13:50:00	17.87	21:50:00	17.04
	6:00:00	16.76	14:00:00	17.89	22:00:00	17.06
	6:10:00	16.77	14:10:00	17.96	22:10:00	17.04
	6:20:00	16.58	14:20:00	18.07	22:20:00	17.05
	6:30:00	16.66	14:30:00	18.02	22:30:00	17.08
6:40:00	16.59	14:40:00	17.99	22:40:00	17.17	
6:50:00	16.6	14:50:00	18.07	22:50:00	17.35	
7:00:00	16.56	15:00:00	18.2	23:00:00	17.52	
7:10:00	16.54	15:10:00	18.24	23:10:00	17.72	
7:20:00	16.54	15:20:00	18.39	23:20:00	17.89	
7:30:00	16.54	15:30:00	18.59	23:30:00	18.02	
7:40:00	16.48	15:40:00	18.68	23:40:00	18.15	
7:50:00	16.47	15:50:00	18.79	23:50:00	18.29	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/22/2008	0:00:00	18.39	8:00:00	17.5	16:00:00	22.37
	0:10:00	18.46	8:10:00	17.36	16:10:00	22.41
	0:20:00	18.5	8:20:00	17.37	16:20:00	22.48
	0:30:00	18.59	8:30:00	17.51	16:30:00	22.48
	0:40:00	18.61	8:40:00	17.55	16:40:00	22.5
	0:50:00	18.63	8:50:00	17.59	16:50:00	22.46
	1:00:00	18.66	9:00:00	17.66	17:00:00	22.43
	1:10:00	18.63	9:10:00	17.72	17:10:00	22.39
	1:20:00	18.66	9:20:00	17.81	17:20:00	22.28
	1:30:00	18.68	9:30:00	17.81	17:30:00	22.24
	1:40:00	18.68	9:40:00	17.96	17:40:00	22.14
	1:50:00	18.66	9:50:00	18.05	17:50:00	22.04
	2:00:00	18.68	10:00:00	18.17	18:00:00	21.98
	2:10:00	18.7	10:10:00	18.24	18:10:00	21.93
	2:20:00	18.66	10:20:00	18.42	18:20:00	21.85
	2:30:00	18.63	10:30:00	18.5	18:30:00	21.78
	2:40:00	18.58	10:40:00	18.61	18:40:00	21.69
	2:50:00	18.56	10:50:00	18.7	18:50:00	21.57
	3:00:00	18.55	11:00:00	18.88	19:00:00	21.55
	3:10:00	18.48	11:10:00	18.98	19:10:00	21.46
	3:20:00	18.46	11:20:00	19.14	19:20:00	21.42
	3:30:00	18.42	11:30:00	19.33	19:30:00	21.36
	3:40:00	18.37	11:40:00	19.55	19:40:00	21.3
	3:50:00	18.31	11:50:00	19.77	19:50:00	21.23
	4:00:00	18.26	12:00:00	19.88	20:00:00	21.17
	4:10:00	18.2	12:10:00	20.1	20:10:00	21.17
	4:20:00	18.15	12:20:00	20.27	20:20:00	21
	4:30:00	18.11	12:30:00	20.53	20:30:00	21
	4:40:00	18.05	12:40:00	20.63	20:40:00	20.95
	4:50:00	18	12:50:00	21.28	20:50:00	20.87
	5:00:00	17.94	13:00:00	21.89	21:00:00	20.86
	5:10:00	17.94	13:10:00	21.92	21:10:00	20.8
	5:20:00	17.87	13:20:00	21.31	21:20:00	20.75
	5:30:00	17.83	13:30:00	21.36	21:30:00	20.64
	5:40:00	17.81	13:40:00	21.44	21:40:00	20.62
	5:50:00	17.74	13:50:00	21.62	21:50:00	20.58
	6:00:00	17.72	14:00:00	21.78	22:00:00	20.49
	6:10:00	17.72	14:10:00	21.85	22:10:00	20.47
	6:20:00	17.67	14:20:00	22.13	22:20:00	20.43
	6:30:00	17.63	14:30:00	22.35	22:30:00	20.31
	6:40:00	17.63	14:40:00	22.52	22:40:00	20.27
	6:50:00	17.61	14:50:00	22.61	22:50:00	20.23
	7:00:00	17.61	15:00:00	22.65	23:00:00	20.21
	7:10:00	17.54	15:10:00	22.63	23:10:00	20.14
	7:20:00	17.59	15:20:00	22.59	23:20:00	20.09
	7:30:00	17.56	15:30:00	22.52	23:30:00	20
	7:40:00	17.54	15:40:00	22.48	23:40:00	19.99
	7:50:00	17.5	15:50:00	22.39	23:50:00	19.92

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/23/2008	0:00:00	19.88	8:00:00	18.37	16:00:00	18.09
	0:10:00	19.86	8:10:00	18.08	16:10:00	18.18
	0:20:00	19.84	8:20:00	18.11	16:20:00	18.26
	0:30:00	19.81	8:30:00	18.25	16:30:00	18.37
	0:40:00	19.73	8:40:00	18.33	16:40:00	18.55
	0:50:00	19.71	8:50:00	18.37	16:50:00	18.53
	1:00:00	19.64	9:00:00	18.42	17:00:00	18.68
	1:10:00	19.64	9:10:00	18.43	17:10:00	18.77
	1:20:00	19.6	9:20:00	18.54	17:20:00	18.81
	1:30:00	19.55	9:30:00	18.56	17:30:00	18.9
	1:40:00	19.53	9:40:00	18.67	17:40:00	19.07
	1:50:00	19.44	9:50:00	18.69	17:50:00	19.2
	2:00:00	19.45	10:00:00	18.76	18:00:00	19.38
	2:10:00	19.4	10:10:00	18.81	18:10:00	19.45
	2:20:00	19.36	10:20:00	18.9	18:20:00	19.56
	2:30:00	19.33	10:30:00	19.03	18:30:00	19.84
	2:40:00	19.31	10:40:00	19.07	18:40:00	20.1
	2:50:00	19.25	10:50:00	19.22	18:50:00	20.25
	3:00:00	19.24	11:00:00	19.36	19:00:00	20.45
	3:10:00	19.18	11:10:00	19.46	19:10:00	20.58
	3:20:00	19.16	11:20:00	19.55	19:20:00	20.58
	3:30:00	19.14	11:30:00	19.66	19:30:00	20.62
	3:40:00	19.09	11:40:00	19.81	19:40:00	20.62
	3:50:00	19.03	11:50:00	19.99	19:50:00	20.64
	4:00:00	19.07	12:00:00	20.21	20:00:00	20.64
	4:10:00	19.05	12:10:00	20.36	20:10:00	20.58
	4:20:00	19.01	12:20:00	20.62	20:20:00	20.53
	4:30:00	18.94	12:30:00	20.82	20:30:00	20.51
	4:40:00	18.94	12:40:00	20.75	20:40:00	20.43
	4:50:00	18.88	12:50:00	20.73	20:50:00	20.34
	5:00:00	18.89	13:00:00	20.62	21:00:00	20.25
	5:10:00	18.84	13:10:00	20.49	21:10:00	20.19
	5:20:00	18.79	13:20:00	19.46	21:20:00	20.05
	5:30:00	18.74	13:30:00	18.09	21:30:00	19.99
	5:40:00	18.73	13:40:00	17.89	21:40:00	19.9
	5:50:00	18.66	13:50:00	17.85	21:50:00	19.88
	6:00:00	18.66	14:00:00	17.76	22:00:00	19.79
	6:10:00	18.61	14:10:00	17.67	22:10:00	19.75
	6:20:00	18.59	14:20:00	17.7	22:20:00	19.66
	6:30:00	18.55	14:30:00	17.72	22:30:00	19.53
	6:40:00	18.55	14:40:00	17.72	22:40:00	19.48
	6:50:00	18.5	14:50:00	17.72	22:50:00	19.42
	7:00:00	18.47	15:00:00	17.65	23:00:00	19.36
	7:10:00	18.44	15:10:00	17.72	23:10:00	19.25
	7:20:00	18.42	15:20:00	17.67	23:20:00	19.21
	7:30:00	18.39	15:30:00	17.67	23:30:00	19.16
	7:40:00	18.37	15:40:00	17.76	23:40:00	19.12
	7:50:00	18.39	15:50:00	17.93	23:50:00	19.07

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/24/2008	0:00:00	19.02	8:00:00	17.72	16:00:00	23.61
	0:10:00	18.93	8:10:00	17.55	16:10:00	23.68
	0:20:00	18.89	8:20:00	17.59	16:20:00	23.78
	0:30:00	18.82	8:30:00	17.88	16:30:00	23.93
	0:40:00	18.81	8:40:00	17.9	16:40:00	23.94
	0:50:00	18.71	8:50:00	17.89	16:50:00	23.86
	1:00:00	18.7	9:00:00	17.84	17:00:00	23.97
	1:10:00	18.66	9:10:00	18.05	17:10:00	24.07
	1:20:00	18.66	9:20:00	18.1	17:20:00	24.06
	1:30:00	18.63	9:30:00	18.1	17:30:00	23.99
	1:40:00	18.57	9:40:00	17.98	17:40:00	23.89
	1:50:00	18.48	9:50:00	18.25	17:50:00	23.99
	2:00:00	18.5	10:00:00	18.36	18:00:00	23.92
	2:10:00	18.53	10:10:00	18.43	18:10:00	23.72
	2:20:00	18.48	10:20:00	18.55	18:20:00	23.75
	2:30:00	18.48	10:30:00	18.72	18:30:00	23.68
	2:40:00	18.46	10:40:00	18.9	18:40:00	23.61
	2:50:00	18.44	10:50:00	19.14	18:50:00	23.51
	3:00:00	18.42	11:00:00	19.38	19:00:00	23.33
	3:10:00	18.35	11:10:00	19.53	19:10:00	23.13
	3:20:00	18.33	11:20:00	19.64	19:20:00	22.98
	3:30:00	18.31	11:30:00	19.81	19:30:00	22.88
	3:40:00	18.26	11:40:00	19.95	19:40:00	22.76
	3:50:00	18.22	11:50:00	20.03	19:50:00	22.63
	4:00:00	18.23	12:00:00	20.19	20:00:00	22.41
	4:10:00	18.17	12:10:00	20.34	20:10:00	22.28
	4:20:00	18.14	12:20:00	20.53	20:20:00	22.15
	4:30:00	18.11	12:30:00	20.71	20:30:00	21.93
	4:40:00	18.07	12:40:00	20.91	20:40:00	21.82
	4:50:00	18.07	12:50:00	20.93	20:50:00	21.66
	5:00:00	18.02	13:00:00	21.11	21:00:00	21.55
	5:10:00	17.98	13:10:00	21.27	21:10:00	21.41
	5:20:00	17.96	13:20:00	21.52	21:20:00	21.27
	5:30:00	17.88	13:30:00	21.65	21:30:00	21.11
	5:40:00	17.93	13:40:00	21.65	21:40:00	21.02
	5:50:00	17.87	13:50:00	21.77	21:50:00	20.88
	6:00:00	17.83	14:00:00	22.05	22:00:00	20.75
	6:10:00	17.83	14:10:00	22.26	22:10:00	20.65
	6:20:00	17.77	14:20:00	22.41	22:20:00	20.51
	6:30:00	17.76	14:30:00	22.55	22:30:00	20.39
	6:40:00	17.72	14:40:00	22.62	22:40:00	20.34
	6:50:00	17.7	14:50:00	22.85	22:50:00	20.2
	7:00:00	17.7	15:00:00	22.81	23:00:00	20.06
	7:10:00	17.67	15:10:00	23.02	23:10:00	19.98
	7:20:00	17.7	15:20:00	23.22	23:20:00	19.87
	7:30:00	17.67	15:30:00	23.31	23:30:00	19.81
	7:40:00	17.7	15:40:00	23.51	23:40:00	19.71
	7:50:00	17.7	15:50:00	23.51	23:50:00	19.62



## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/25/2008	0:00:00	19.55	8:00:00	17.28	16:00:00	23.69
	0:10:00	19.44	8:10:00	17.1	16:10:00	23.93
	0:20:00	19.38	8:20:00	17.13	16:20:00	24.03
	0:30:00	19.29	8:30:00	17.32	16:30:00	24.12
	0:40:00	19.25	8:40:00	17.35	16:40:00	24.2
	0:50:00	19.16	8:50:00	17.43	16:50:00	24.25
	1:00:00	19.09	9:00:00	17.53	17:00:00	24.33
	1:10:00	19.03	9:10:00	17.64	17:10:00	24.42
	1:20:00	18.94	9:20:00	17.7	17:20:00	24.4
	1:30:00	18.84	9:30:00	17.82	17:30:00	24.51
	1:40:00	18.81	9:40:00	17.76	17:40:00	24.53
	1:50:00	18.75	9:50:00	18.02	17:50:00	24.55
	2:00:00	18.7	10:00:00	18.07	18:00:00	24.51
	2:10:00	18.61	10:10:00	18.23	18:10:00	24.51
	2:20:00	18.57	10:20:00	18.33	18:20:00	24.47
	2:30:00	18.53	10:30:00	18.46	18:30:00	24.42
	2:40:00	18.48	10:40:00	18.57	18:40:00	24.27
	2:50:00	18.42	10:50:00	18.63	18:50:00	24.2
	3:00:00	18.39	11:00:00	18.79	19:00:00	24.05
	3:10:00	18.29	11:10:00	18.9	19:10:00	23.99
	3:20:00	18.24	11:20:00	19.01	19:20:00	23.83
	3:30:00	18.21	11:30:00	19.18	19:30:00	23.68
	3:40:00	18.2	11:40:00	19.33	19:40:00	23.55
	3:50:00	18.13	11:50:00	19.55	19:50:00	23.35
	4:00:00	18.07	12:00:00	19.75	20:00:00	23.19
	4:10:00	18.05	12:10:00	19.95	20:10:00	23.05
	4:20:00	18	12:20:00	20.16	20:20:00	22.88
	4:30:00	17.95	12:30:00	20.38	20:30:00	22.64
	4:40:00	17.91	12:40:00	20.53	20:40:00	22.5
	4:50:00	17.83	12:50:00	20.75	20:50:00	22.39
	5:00:00	17.85	13:00:00	20.97	21:00:00	22.28
	5:10:00	17.78	13:10:00	21.19	21:10:00	22.12
	5:20:00	17.76	13:20:00	21.34	21:20:00	21.96
	5:30:00	17.72	13:30:00	21.43	21:30:00	21.87
	5:40:00	17.67	13:40:00	21.52	21:40:00	21.71
	5:50:00	17.65	13:50:00	21.67	21:50:00	21.61
	6:00:00	17.56	14:00:00	21.82	22:00:00	21.5
	6:10:00	17.54	14:10:00	21.98	22:10:00	21.36
	6:20:00	17.48	14:20:00	22.15	22:20:00	21.26
	6:30:00	17.5	14:30:00	22.3	22:30:00	21.15
6:40:00	17.43	14:40:00	22.43	22:40:00	21.04	
6:50:00	17.41	14:50:00	22.65	22:50:00	20.93	
7:00:00	17.37	15:00:00	22.83	23:00:00	20.86	
7:10:00	17.38	15:10:00	22.92	23:10:00	20.75	
7:20:00	17.38	15:20:00	23.18	23:20:00	20.62	
7:30:00	17.3	15:30:00	23.32	23:30:00	20.52	
7:40:00	17.28	15:40:00	23.53	23:40:00	20.44	
7:50:00	17.3	15:50:00	23.66	23:50:00	20.34	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/26/2008	0:00:00	20.23	8:00:00	18.63	16:00:00	24.38
	0:10:00	20.14	8:10:00	18.68	16:10:00	24.12
	0:20:00	20.02	8:20:00	18.72	16:20:00	23.46
	0:30:00	19.99	8:30:00	18.7	16:30:00	22.59
	0:40:00	19.89	8:40:00	18.77	16:40:00	20.53
	0:50:00	19.84	8:50:00	18.79	16:50:00	19.53
	1:00:00	19.75	9:00:00	18.83	17:00:00	19.2
	1:10:00	19.68	9:10:00	18.9	17:10:00	18.98
	1:20:00	19.6	9:20:00	18.94	17:20:00	18.72
	1:30:00	19.53	9:30:00	18.91	17:30:00	18.59
	1:40:00	19.46	9:40:00	18.94	17:40:00	18.42
	1:50:00	19.42	9:50:00	18.99	17:50:00	18.26
	2:00:00	19.4	10:00:00	19.07	18:00:00	18.09
	2:10:00	19.31	10:10:00	19.18	18:10:00	17.94
	2:20:00	19.27	10:20:00	19.21	18:20:00	17.91
	2:30:00	19.22	10:30:00	19.33	18:30:00	17.78
	2:40:00	19.18	10:40:00	19.36	18:40:00	17.74
	2:50:00	19.16	10:50:00	19.44	18:50:00	17.7
	3:00:00	19.09	11:00:00	19.53	19:00:00	17.71
	3:10:00	19.07	11:10:00	19.66	19:10:00	17.68
	3:20:00	19.01	11:20:00	19.76	19:20:00	17.66
	3:30:00	19.01	11:30:00	19.93	19:30:00	17.63
	3:40:00	18.98	11:40:00	20.09	19:40:00	17.71
	3:50:00	18.94	11:50:00	20.22	19:50:00	17.71
	4:00:00	18.92	12:00:00	20.25	20:00:00	17.7
	4:10:00	18.9	12:10:00	20.44	20:10:00	17.75
	4:20:00	18.85	12:20:00	20.7	20:20:00	17.76
	4:30:00	18.83	12:30:00	21	20:30:00	17.77
	4:40:00	18.81	12:40:00	21.28	20:40:00	17.72
	4:50:00	18.81	12:50:00	21.52	20:50:00	17.68
	5:00:00	18.79	13:00:00	21.78	21:00:00	17.72
	5:10:00	18.77	13:10:00	21.98	21:10:00	17.72
	5:20:00	18.79	13:20:00	22.22	21:20:00	17.7
	5:30:00	18.77	13:30:00	22.54	21:30:00	17.67
	5:40:00	18.72	13:40:00	22.78	21:40:00	17.63
	5:50:00	18.72	13:50:00	23	21:50:00	17.65
	6:00:00	18.72	14:00:00	23.29	22:00:00	17.6
	6:10:00	18.68	14:10:00	23.33	22:10:00	17.61
	6:20:00	18.68	14:20:00	23.41	22:20:00	17.63
	6:30:00	18.68	14:30:00	23.58	22:30:00	17.74
	6:40:00	18.68	14:40:00	23.68	22:40:00	17.84
	6:50:00	18.63	14:50:00	23.81	22:50:00	18.03
	7:00:00	18.61	15:00:00	24.01	23:00:00	18.22
	7:10:00	18.63	15:10:00	24.16	23:10:00	18.41
	7:20:00	18.63	15:20:00	24.31	23:20:00	18.58
	7:30:00	18.66	15:30:00	24.47	23:30:00	18.78
	7:40:00	18.63	15:40:00	24.45	23:40:00	18.91
	7:50:00	18.59	15:50:00	24.4	23:50:00	19.06

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/27/2008	0:00:00	19.17	8:00:00	19.65	16:00:00	18.33
	0:10:00	19.32	8:10:00	19.68	16:10:00	18.42
	0:20:00	19.4	8:20:00	19.73	16:20:00	18.41
	0:30:00	19.5	8:30:00	19.73	16:30:00	18.38
	0:40:00	19.57	8:40:00	19.81	16:40:00	18.5
	0:50:00	19.66	8:50:00	19.88	16:50:00	18.53
	1:00:00	19.67	9:00:00	19.92	17:00:00	18.46
	1:10:00	19.73	9:10:00	19.97	17:10:00	18.34
	1:20:00	19.77	9:20:00	20.05	17:20:00	18.17
	1:30:00	19.76	9:30:00	20.2	17:30:00	18.03
	1:40:00	19.82	9:40:00	20.32	17:40:00	17.95
	1:50:00	19.87	9:50:00	20.37	17:50:00	17.87
	2:00:00	19.88	10:00:00	20.48	18:00:00	17.72
	2:10:00	19.86	10:10:00	20.61	18:10:00	17.61
	2:20:00	19.86	10:20:00	20.78	18:20:00	17.44
	2:30:00	19.86	10:30:00	20.86	18:30:00	17.31
	2:40:00	19.9	10:40:00	20.99	18:40:00	17.19
	2:50:00	19.88	10:50:00	21.08	18:50:00	17.13
	3:00:00	19.9	11:00:00	21.2	19:00:00	17.03
	3:10:00	19.9	11:10:00	21.36	19:10:00	16.93
	3:20:00	19.92	11:20:00	21.47	19:20:00	16.76
	3:30:00	19.92	11:30:00	21.64	19:30:00	16.76
	3:40:00	19.9	11:40:00	21.75	19:40:00	16.69
	3:50:00	19.88	11:50:00	21.79	19:50:00	16.67
	4:00:00	19.92	12:00:00	21.91	20:00:00	16.66
	4:10:00	19.88	12:10:00	22.07	20:10:00	16.69
	4:20:00	19.9	12:20:00	22.3	20:20:00	16.63
	4:30:00	19.88	12:30:00	22.54	20:30:00	16.65
	4:40:00	19.84	12:40:00	22.61	20:40:00	16.68
	4:50:00	19.86	12:50:00	22.65	20:50:00	16.7
	5:00:00	19.86	13:00:00	22.59	21:00:00	16.7
	5:10:00	19.86	13:10:00	22.3	21:10:00	16.72
	5:20:00	19.81	13:20:00	21.12	21:20:00	16.73
	5:30:00	19.81	13:30:00	19.12	21:30:00	16.73
	5:40:00	19.78	13:40:00	18.72	21:40:00	16.76
	5:50:00	19.74	13:50:00	18.42	21:50:00	16.73
	6:00:00	19.75	14:00:00	18.21	22:00:00	16.77
	6:10:00	19.75	14:10:00	18.06	22:10:00	16.77
	6:20:00	19.68	14:20:00	17.99	22:20:00	16.78
	6:30:00	19.68	14:30:00	17.9	22:30:00	16.82
	6:40:00	19.64	14:40:00	17.76	22:40:00	16.86
	6:50:00	19.64	14:50:00	17.68	22:50:00	16.92
	7:00:00	19.67	15:00:00	17.76	23:00:00	17.13
	7:10:00	19.64	15:10:00	17.89	23:10:00	17.36
	7:20:00	19.65	15:20:00	17.92	23:20:00	17.7
	7:30:00	19.68	15:30:00	18.11	23:30:00	17.94
	7:40:00	19.65	15:40:00	18.24	23:40:00	18.23
	7:50:00	19.71	15:50:00	18.26	23:50:00	18.43

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/28/2008	0:00:00	18.62	8:00:00	20.12	16:00:00	18.39
	0:10:00	18.82	8:10:00	20.14	16:10:00	18.63
	0:20:00	19.01	8:20:00	20.21	16:20:00	18.79
	0:30:00	19.15	8:30:00	20.19	16:30:00	18.96
	0:40:00	19.26	8:40:00	20.25	16:40:00	19.03
	0:50:00	19.39	8:50:00	20.25	16:50:00	19.09
	1:00:00	19.46	9:00:00	20.27	17:00:00	19.4
	1:10:00	19.55	9:10:00	20.32	17:10:00	19.55
	1:20:00	19.66	9:20:00	20.38	17:20:00	19.53
	1:30:00	19.67	9:30:00	20.45	17:30:00	19.6
	1:40:00	19.73	9:40:00	20.45	17:40:00	19.66
	1:50:00	19.81	9:50:00	20.43	17:50:00	19.79
	2:00:00	19.84	10:00:00	20.43	18:00:00	19.79
	2:10:00	19.92	10:10:00	20.47	18:10:00	19.77
	2:20:00	19.97	10:20:00	20.51	18:20:00	19.79
	2:30:00	19.97	10:30:00	20.53	18:30:00	19.75
	2:40:00	20.01	10:40:00	20.62	18:40:00	19.78
	2:50:00	20.01	10:50:00	20.67	18:50:00	19.76
	3:00:00	20.03	11:00:00	20.73	19:00:00	19.74
	3:10:00	20.03	11:10:00	20.82	19:10:00	19.76
	3:20:00	20.05	11:20:00	20.88	19:20:00	19.81
	3:30:00	20.04	11:30:00	20.93	19:30:00	20.03
	3:40:00	20.05	11:40:00	21.06	19:40:00	20.23
	3:50:00	20.05	11:50:00	21.1	19:50:00	20.38
	4:00:00	20.03	12:00:00	21.3	20:00:00	20.52
	4:10:00	20.02	12:10:00	21.61	20:10:00	20.7
	4:20:00	20.03	12:20:00	21.76	20:20:00	20.83
	4:30:00	19.98	12:30:00	21.95	20:30:00	20.94
	4:40:00	19.99	12:40:00	22.15	20:40:00	21.07
	4:50:00	20.01	12:50:00	22.06	20:50:00	21.13
	5:00:00	19.99	13:00:00	22.04	21:00:00	21.23
	5:10:00	19.99	13:10:00	21.86	21:10:00	21.27
	5:20:00	19.97	13:20:00	21.06	21:20:00	21.32
	5:30:00	19.95	13:30:00	19.2	21:30:00	21.33
	5:40:00	19.97	13:40:00	18.77	21:40:00	21.31
	5:50:00	19.95	13:50:00	18.66	21:50:00	21.31
	6:00:00	19.92	14:00:00	18.57	22:00:00	21.32
	6:10:00	19.92	14:10:00	18.5	22:10:00	21.3
	6:20:00	19.91	14:20:00	18.42	22:20:00	21.28
	6:30:00	19.92	14:30:00	18.43	22:30:00	21.23
	6:40:00	19.91	14:40:00	18.44	22:40:00	21.19
	6:50:00	19.95	14:50:00	18.35	22:50:00	21.15
	7:00:00	19.95	15:00:00	18.34	23:00:00	21.1
	7:10:00	19.96	15:10:00	18.29	23:10:00	21.08
	7:20:00	19.98	15:20:00	18.22	23:20:00	21.06
	7:30:00	19.99	15:30:00	18.22	23:30:00	21.02
	7:40:00	20.03	15:40:00	18.2	23:40:00	20.93
	7:50:00	20.05	15:50:00	18.31	23:50:00	20.93

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/29/2008	0:00:00	20.88	8:00:00	19.32	16:00:00	22.55
	0:10:00	20.91	8:10:00	19.36	16:10:00	22.76
	0:20:00	20.82	8:20:00	19.36	16:20:00	22.87
	0:30:00	20.78	8:30:00	19.39	16:30:00	22.89
	0:40:00	20.78	8:40:00	19.39	16:40:00	22.98
	0:50:00	20.75	8:50:00	19.4	16:50:00	23.05
	1:00:00	20.73	9:00:00	19.42	17:00:00	23.07
	1:10:00	20.67	9:10:00	19.46	17:10:00	23.18
	1:20:00	20.61	9:20:00	19.49	17:20:00	23.07
	1:30:00	20.59	9:30:00	19.46	17:30:00	23.09
	1:40:00	20.58	9:40:00	19.52	17:40:00	23.09
	1:50:00	20.53	9:50:00	19.5	17:50:00	23.11
	2:00:00	20.47	10:00:00	19.52	18:00:00	23.24
	2:10:00	20.43	10:10:00	19.54	18:10:00	23.21
	2:20:00	20.36	10:20:00	19.66	18:20:00	23.08
	2:30:00	20.28	10:30:00	19.71	18:30:00	23.08
	2:40:00	20.32	10:40:00	19.88	18:40:00	22.99
	2:50:00	20.21	10:50:00	19.99	18:50:00	22.99
	3:00:00	20.13	11:00:00	20.04	19:00:00	23
	3:10:00	20.1	11:10:00	20.13	19:10:00	22.89
	3:20:00	20.05	11:20:00	20.23	19:20:00	22.76
	3:30:00	19.96	11:30:00	20.24	19:30:00	22.65
	3:40:00	19.93	11:40:00	20.33	19:40:00	22.53
	3:50:00	19.86	11:50:00	20.49	19:50:00	22.5
	4:00:00	19.8	12:00:00	20.53	20:00:00	22.31
	4:10:00	19.75	12:10:00	20.62	20:10:00	22.26
	4:20:00	19.69	12:20:00	20.75	20:20:00	22.05
	4:30:00	19.66	12:30:00	20.84	20:30:00	22.09
	4:40:00	19.58	12:40:00	20.91	20:40:00	21.95
	4:50:00	19.57	12:50:00	21.04	20:50:00	21.89
	5:00:00	19.51	13:00:00	21.19	21:00:00	21.79
	5:10:00	19.49	13:10:00	21.23	21:10:00	21.74
	5:20:00	19.46	13:20:00	21.36	21:20:00	21.67
	5:30:00	19.42	13:30:00	21.47	21:30:00	21.63
	5:40:00	19.39	13:40:00	21.51	21:40:00	21.48
	5:50:00	19.37	13:50:00	21.62	21:50:00	21.44
	6:00:00	19.32	14:00:00	21.78	22:00:00	21.39
	6:10:00	19.37	14:10:00	21.77	22:10:00	21.32
	6:20:00	19.28	14:20:00	21.81	22:20:00	21.28
	6:30:00	19.31	14:30:00	21.92	22:30:00	21.26
6:40:00	19.31	14:40:00	22.04	22:40:00	21.17	
6:50:00	19.29	14:50:00	22.14	22:50:00	21.09	
7:00:00	19.29	15:00:00	22.2	23:00:00	21.08	
7:10:00	19.31	15:10:00	22.19	23:10:00	21.04	
7:20:00	19.31	15:20:00	22.33	23:20:00	20.95	
7:30:00	19.33	15:30:00	22.43	23:30:00	20.88	
7:40:00	19.29	15:40:00	22.5	23:40:00	20.84	
7:50:00	19.3	15:50:00	22.64	23:50:00	20.79	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
6/30/2008	0:00:00	20.76	8:00:00	19.71	16:00:00	18.03
	0:10:00	20.7	8:10:00	19.67	16:10:00	18.11
	0:20:00	20.67	8:20:00	19.69	16:20:00	18.08
	0:30:00	20.61	8:30:00	19.73	16:30:00	18.22
	0:40:00	20.59	8:40:00	19.69	16:40:00	18.22
	0:50:00	20.52	8:50:00	19.72	16:50:00	18.32
	1:00:00	20.46	9:00:00	19.75	17:00:00	18.39
	1:10:00	20.41	9:10:00	19.79	17:10:00	18.47
	1:20:00	20.39	9:20:00	19.79	17:20:00	18.68
	1:30:00	20.37	9:30:00	19.81	17:30:00	18.99
	1:40:00	20.31	9:40:00	19.78	17:40:00	19.31
	1:50:00	20.31	9:50:00	19.92	17:50:00	19.65
	2:00:00	20.27	10:00:00	19.95	18:00:00	19.96
	2:10:00	20.23	10:10:00	19.97	18:10:00	20.19
	2:20:00	20.25	10:20:00	19.97	18:20:00	20.28
	2:30:00	20.14	10:30:00	19.83	18:30:00	20.39
	2:40:00	20.14	10:40:00	20.2	18:40:00	20.41
	2:50:00	20.11	10:50:00	20.26	18:50:00	20.51
	3:00:00	20.06	11:00:00	20.21	19:00:00	20.51
	3:10:00	20.03	11:10:00	20.52	19:10:00	20.56
	3:20:00	20.05	11:20:00	20.59	19:20:00	20.56
	3:30:00	20.01	11:30:00	20.75	19:30:00	20.56
	3:40:00	19.97	11:40:00	20.78	19:40:00	20.52
	3:50:00	19.92	11:50:00	20.78	19:50:00	20.49
	4:00:00	19.95	12:00:00	20.82	20:00:00	20.45
	4:10:00	19.9	12:10:00	20.97	20:10:00	20.45
	4:20:00	19.87	12:20:00	20.97	20:20:00	20.35
	4:30:00	19.84	12:30:00	20.94	20:30:00	20.31
	4:40:00	19.85	12:40:00	20.86	20:40:00	20.27
	4:50:00	19.84	12:50:00	20.8	20:50:00	20.27
	5:00:00	19.79	13:00:00	20.55	21:00:00	20.2
	5:10:00	19.77	13:10:00	18.81	21:10:00	20.19
	5:20:00	19.71	13:20:00	18.03	21:20:00	20.12
	5:30:00	19.71	13:30:00	18.03	21:30:00	20.1
	5:40:00	19.71	13:40:00	17.81	21:40:00	20.09
	5:50:00	19.71	13:50:00	17.7	21:50:00	20.08
	6:00:00	19.68	14:00:00	17.56	22:00:00	20.05
	6:10:00	19.66	14:10:00	17.52	22:10:00	19.99
	6:20:00	19.67	14:20:00	17.5	22:20:00	19.97
	6:30:00	19.66	14:30:00	17.46	22:30:00	19.95
	6:40:00	19.66	14:40:00	17.47	22:40:00	19.91
	6:50:00	19.65	14:50:00	17.52	22:50:00	19.9
	7:00:00	19.67	15:00:00	17.58	23:00:00	19.87
	7:10:00	19.71	15:10:00	17.67	23:10:00	19.79
	7:20:00	19.68	15:20:00	17.76	23:20:00	19.77
	7:30:00	19.71	15:30:00	17.87	23:30:00	19.71
	7:40:00	19.72	15:40:00	17.96	23:40:00	19.71
	7:50:00	19.73	15:50:00	17.99	23:50:00	19.67

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/1/2008	0:00:00	19.63	8:00:00	18.51	16:00:00	19.97
	0:10:00	19.61	8:10:00	18.48	16:10:00	19.92
	0:20:00	19.54	8:20:00	18.5	16:20:00	19.86
	0:30:00	19.54	8:30:00	18.48	16:30:00	19.84
	0:40:00	19.55	8:40:00	18.5	16:40:00	19.92
	0:50:00	19.55	8:50:00	18.48	16:50:00	20.03
	1:00:00	19.51	9:00:00	18.45	17:00:00	19.99
	1:10:00	19.49	9:10:00	18.45	17:10:00	20.01
	1:20:00	19.46	9:20:00	18.48	17:20:00	20.05
	1:30:00	19.46	9:30:00	18.48	17:30:00	20.05
	1:40:00	19.39	9:40:00	18.5	17:40:00	20.05
	1:50:00	19.38	9:50:00	18.43	17:50:00	19.99
	2:00:00	19.39	10:00:00	18.48	18:00:00	19.99
	2:10:00	19.37	10:10:00	18.48	18:10:00	20.03
	2:20:00	19.3	10:20:00	18.46	18:20:00	20.03
	2:30:00	19.27	10:30:00	18.57	18:30:00	19.97
	2:40:00	19.27	10:40:00	18.55	18:40:00	19.85
	2:50:00	19.21	10:50:00	18.5	18:50:00	19.73
	3:00:00	19.21	11:00:00	18.55	19:00:00	19.5
	3:10:00	19.18	11:10:00	18.59	19:10:00	18.55
	3:20:00	19.14	11:20:00	18.7	19:20:00	17.23
	3:30:00	19.12	11:30:00	18.7	19:30:00	16.96
	3:40:00	19.12	11:40:00	18.72	19:40:00	16.76
	3:50:00	19.12	11:50:00	18.74	19:50:00	16.52
	4:00:00	19.05	12:00:00	18.81	20:00:00	16.37
	4:10:00	19.03	12:10:00	18.94	20:10:00	16.31
	4:20:00	19.01	12:20:00	19.03	20:20:00	16.18
	4:30:00	18.95	12:30:00	19.02	20:30:00	16.15
	4:40:00	18.96	12:40:00	19.02	20:40:00	16.09
	4:50:00	18.92	12:50:00	19.12	20:50:00	16.06
	5:00:00	18.92	13:00:00	19.17	21:00:00	16.03
	5:10:00	18.88	13:10:00	19.24	21:10:00	15.99
	5:20:00	18.83	13:20:00	19.4	21:20:00	16.05
	5:30:00	18.79	13:30:00	19.4	21:30:00	16.04
	5:40:00	18.77	13:40:00	19.4	21:40:00	16.06
	5:50:00	18.77	13:50:00	19.6	21:50:00	15.99
	6:00:00	18.72	14:00:00	19.52	22:00:00	16.04
	6:10:00	18.68	14:10:00	19.58	22:10:00	15.99
	6:20:00	18.68	14:20:00	19.71	22:20:00	15.99
	6:30:00	18.66	14:30:00	19.79	22:30:00	15.97
	6:40:00	18.62	14:40:00	19.9	22:40:00	15.99
	6:50:00	18.66	14:50:00	19.87	22:50:00	16.08
	7:00:00	18.55	15:00:00	19.86	23:00:00	16.21
	7:10:00	18.59	15:10:00	19.85	23:10:00	16.43
	7:20:00	18.55	15:20:00	19.81	23:20:00	16.6
	7:30:00	18.59	15:30:00	19.79	23:30:00	16.77
	7:40:00	18.55	15:40:00	19.81	23:40:00	16.93
	7:50:00	18.55	15:50:00	19.9	23:50:00	17.04

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/2/2008	0:00:00	17.11	8:00:00	16.52	16:00:00	23.08
	0:10:00	17.17	8:10:00	16.47	16:10:00	23.17
	0:20:00	17.17	8:20:00	16.22	16:20:00	23.24
	0:30:00	17.3	8:30:00	16.39	16:30:00	23.36
	0:40:00	17.32	8:40:00	16.54	16:40:00	23.4
	0:50:00	17.37	8:50:00	16.54	16:50:00	23.46
	1:00:00	17.37	9:00:00	16.61	17:00:00	23.53
	1:10:00	17.4	9:10:00	16.68	17:10:00	23.48
	1:20:00	17.39	9:20:00	16.79	17:20:00	23.53
	1:30:00	17.35	9:30:00	16.83	17:30:00	23.55
	1:40:00	17.3	9:40:00	16.93	17:40:00	23.53
	1:50:00	17.41	9:50:00	17	17:50:00	23.59
	2:00:00	17.37	10:00:00	17.08	18:00:00	23.48
	2:10:00	17.34	10:10:00	17.19	18:10:00	23.46
	2:20:00	17.3	10:20:00	17.28	18:20:00	23.4
	2:30:00	17.26	10:30:00	17.35	18:30:00	23.29
	2:40:00	17.26	10:40:00	17.46	18:40:00	23.24
	2:50:00	17.2	10:50:00	17.59	18:50:00	23.07
	3:00:00	17.24	11:00:00	17.74	19:00:00	22.94
	3:10:00	17.19	11:10:00	17.89	19:10:00	22.77
	3:20:00	17.19	11:20:00	18.01	19:20:00	22.66
	3:30:00	17.13	11:30:00	18.17	19:30:00	22.45
	3:40:00	17.15	11:40:00	18.37	19:40:00	22.24
	3:50:00	17.1	11:50:00	18.58	19:50:00	22.06
	4:00:00	17.08	12:00:00	18.71	20:00:00	21.87
	4:10:00	17.02	12:10:00	18.92	20:10:00	21.67
	4:20:00	17.02	12:20:00	19.07	20:20:00	21.52
	4:30:00	17	12:30:00	19.18	20:30:00	21.32
	4:40:00	16.98	12:40:00	20.47	20:40:00	21.17
	4:50:00	16.93	12:50:00	20.61	20:50:00	21.02
	5:00:00	16.91	13:00:00	20.72	21:00:00	20.83
	5:10:00	16.84	13:10:00	20.72	21:10:00	20.69
	5:20:00	16.83	13:20:00	20.81	21:20:00	20.52
	5:30:00	16.84	13:30:00	21.11	21:30:00	20.41
	5:40:00	16.76	13:40:00	20.61	21:40:00	20.32
	5:50:00	16.71	13:50:00	20.81	21:50:00	20.17
	6:00:00	16.71	14:00:00	21.07	22:00:00	20.04
	6:10:00	16.67	14:10:00	21.31	22:10:00	19.99
	6:20:00	16.66	14:20:00	21.57	22:20:00	19.88
	6:30:00	16.65	14:30:00	21.75	22:30:00	19.79
	6:40:00	16.6	14:40:00	22	22:40:00	19.64
	6:50:00	16.56	14:50:00	22.22	22:50:00	19.6
	7:00:00	16.54	15:00:00	22.33	23:00:00	19.51
	7:10:00	16.54	15:10:00	22.5	23:10:00	19.41
	7:20:00	16.48	15:20:00	22.68	23:20:00	19.36
	7:30:00	16.52	15:30:00	22.74	23:30:00	19.25
	7:40:00	16.52	15:40:00	22.87	23:40:00	19.2
	7:50:00	16.49	15:50:00	23.01	23:50:00	19.08



## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/3/2008	0:00:00	19.03	8:00:00	17.5	16:00:00	24.72
	0:10:00	18.98	8:10:00	17.56	16:10:00	24.67
	0:20:00	18.92	8:20:00	17.51	16:20:00	24.66
	0:30:00	18.85	8:30:00	17.59	16:30:00	24.61
	0:40:00	18.8	8:40:00	17.59	16:40:00	24.62
	0:50:00	18.75	8:50:00	17.63	16:50:00	24.54
	1:00:00	18.67	9:00:00	17.76	17:00:00	24.56
	1:10:00	18.66	9:10:00	17.87	17:10:00	24.51
	1:20:00	18.6	9:20:00	17.91	17:20:00	24.4
	1:30:00	18.51	9:30:00	18.05	17:30:00	24.34
	1:40:00	18.48	9:40:00	18.06	17:40:00	24.19
	1:50:00	18.46	9:50:00	18.19	17:50:00	24.06
	2:00:00	18.42	10:00:00	18.26	18:00:00	23.96
	2:10:00	18.35	10:10:00	18.37	18:10:00	23.86
	2:20:00	18.33	10:20:00	18.47	18:20:00	23.76
	2:30:00	18.26	10:30:00	18.62	18:30:00	23.67
	2:40:00	18.26	10:40:00	18.78	18:40:00	23.52
	2:50:00	18.24	10:50:00	18.94	18:50:00	23.34
	3:00:00	18.22	11:00:00	19.12	19:00:00	23.21
	3:10:00	18.22	11:10:00	19.22	19:10:00	23.09
	3:20:00	18.13	11:20:00	19.44	19:20:00	23.02
	3:30:00	18.11	11:30:00	19.66	19:30:00	22.83
	3:40:00	18.11	11:40:00	19.86	19:40:00	22.78
	3:50:00	18.02	11:50:00	20.02	19:50:00	22.65
	4:00:00	18	12:00:00	20.21	20:00:00	22.52
	4:10:00	18.01	12:10:00	20.45	20:10:00	22.41
	4:20:00	17.96	12:20:00	20.75	20:20:00	22.28
	4:30:00	17.89	12:30:00	20.95	20:30:00	22.17
	4:40:00	17.89	12:40:00	21.33	20:40:00	22.04
	4:50:00	17.83	12:50:00	21.55	20:50:00	21.94
	5:00:00	17.83	13:00:00	22.18	21:00:00	21.79
	5:10:00	17.76	13:10:00	22.73	21:10:00	21.74
	5:20:00	17.76	13:20:00	22.62	21:20:00	21.63
	5:30:00	17.74	13:30:00	22.12	21:30:00	21.54
	5:40:00	17.7	13:40:00	22.31	21:40:00	21.45
	5:50:00	17.67	13:50:00	22.58	21:50:00	21.38
	6:00:00	17.65	14:00:00	22.77	22:00:00	21.32
	6:10:00	17.61	14:10:00	22.98	22:10:00	21.19
	6:20:00	17.46	14:20:00	23.23	22:20:00	21.12
	6:30:00	17.52	14:30:00	23.46	22:30:00	21.04
6:40:00	17.52	14:40:00	23.7	22:40:00	20.97	
6:50:00	17.52	14:50:00	23.88	22:50:00	20.87	
7:00:00	17.5	15:00:00	24.05	23:00:00	20.83	
7:10:00	17.5	15:10:00	24.29	23:10:00	20.79	
7:20:00	17.43	15:20:00	24.37	23:20:00	20.71	
7:30:00	17.48	15:30:00	24.5	23:30:00	20.63	
7:40:00	17.5	15:40:00	24.49	23:40:00	20.59	
7:50:00	17.46	15:50:00	24.52	23:50:00	20.52	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/4/2008	0:00:00	20.48	8:00:00	19.49	16:00:00	17.02
	0:10:00	20.44	8:10:00	19.48	16:10:00	17.05
	0:20:00	20.39	8:20:00	19.49	16:20:00	17.13
	0:30:00	20.36	8:30:00	19.46	16:30:00	17.17
	0:40:00	20.31	8:40:00	19.51	16:40:00	17.38
	0:50:00	20.26	8:50:00	19.49	16:50:00	17.88
	1:00:00	20.27	9:00:00	19.48	17:00:00	18.33
	1:10:00	20.25	9:10:00	19.48	17:10:00	18.66
	1:20:00	20.17	9:20:00	19.49	17:20:00	18.9
	1:30:00	20.14	9:30:00	19.49	17:30:00	19.04
	1:40:00	20.09	9:40:00	19.49	17:40:00	19.2
	1:50:00	20.06	9:50:00	19.46	17:50:00	19.27
	2:00:00	20.08	10:00:00	19.51	18:00:00	19.32
	2:10:00	20.03	10:10:00	19.54	18:10:00	19.37
	2:20:00	19.99	10:20:00	19.54	18:20:00	19.46
	2:30:00	19.96	10:30:00	19.58	18:30:00	19.48
	2:40:00	19.97	10:40:00	19.62	18:40:00	19.5
	2:50:00	19.97	10:50:00	19.58	18:50:00	19.5
	3:00:00	19.91	11:00:00	19.64	19:00:00	19.43
	3:10:00	19.9	11:10:00	19.62	19:10:00	19.48
	3:20:00	19.84	11:20:00	19.64	19:20:00	19.45
	3:30:00	19.86	11:30:00	19.71	19:30:00	19.46
	3:40:00	19.8	11:40:00	19.73	19:40:00	19.38
	3:50:00	19.75	11:50:00	19.77	19:50:00	19.41
	4:00:00	19.76	12:00:00	19.84	20:00:00	19.37
	4:10:00	19.74	12:10:00	19.86	20:10:00	19.4
	4:20:00	19.77	12:20:00	19.9	20:20:00	19.33
	4:30:00	19.72	12:30:00	19.93	20:30:00	19.31
	4:40:00	19.67	12:40:00	19.96	20:40:00	19.31
	4:50:00	19.68	12:50:00	19.97	20:50:00	19.26
	5:00:00	19.68	13:00:00	19.17	21:00:00	19.19
	5:10:00	19.68	13:10:00	17.63	21:10:00	19.22
	5:20:00	19.61	13:20:00	17.37	21:20:00	19.18
	5:30:00	19.6	13:30:00	17.25	21:30:00	19.17
	5:40:00	19.62	13:40:00	17.06	21:40:00	19.12
	5:50:00	19.6	13:50:00	16.98	21:50:00	19.09
	6:00:00	19.55	14:00:00	16.9	22:00:00	19.07
	6:10:00	19.56	14:10:00	16.91	22:10:00	19.05
	6:20:00	19.53	14:20:00	16.87	22:20:00	18.99
	6:30:00	19.6	14:30:00	16.8	22:30:00	18.94
	6:40:00	19.56	14:40:00	16.83	22:40:00	18.95
	6:50:00	19.52	14:50:00	16.81	22:50:00	18.93
	7:00:00	19.5	15:00:00	16.9	23:00:00	18.89
	7:10:00	19.53	15:10:00	16.89	23:10:00	18.88
	7:20:00	19.53	15:20:00	16.92	23:20:00	18.88
	7:30:00	19.5	15:30:00	16.9	23:30:00	18.9
	7:40:00	19.5	15:40:00	16.94	23:40:00	18.88
	7:50:00	19.5	15:50:00	16.98	23:50:00	18.83

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/5/2008	0:00:00	18.8	8:00:00	18.09	16:00:00	17.14
	0:10:00	18.78	8:10:00	18.11	16:10:00	17.26
	0:20:00	18.78	8:20:00	18.11	16:20:00	17.29
	0:30:00	18.73	8:30:00	18.11	16:30:00	17.35
	0:40:00	18.73	8:40:00	18.11	16:40:00	17.42
	0:50:00	18.74	8:50:00	18.11	16:50:00	17.44
	1:00:00	18.69	9:00:00	18.12	17:00:00	17.56
	1:10:00	18.69	9:10:00	18.17	17:10:00	17.61
	1:20:00	18.68	9:20:00	18.22	17:20:00	17.63
	1:30:00	18.63	9:30:00	18.24	17:30:00	17.67
	1:40:00	18.58	9:40:00	18.31	17:40:00	17.67
	1:50:00	18.62	9:50:00	18.27	17:50:00	17.61
	2:00:00	18.62	10:00:00	18.29	18:00:00	17.58
	2:10:00	18.59	10:10:00	18.27	18:10:00	17.54
	2:20:00	18.56	10:20:00	18.29	18:20:00	17.42
	2:30:00	18.54	10:30:00	18.37	18:30:00	17.41
	2:40:00	18.5	10:40:00	18.48	18:40:00	17.36
	2:50:00	18.53	10:50:00	18.48	18:50:00	17.29
	3:00:00	18.46	11:00:00	18.43	19:00:00	17.24
	3:10:00	18.47	11:10:00	18.35	19:10:00	17.19
	3:20:00	18.46	11:20:00	18.36	19:20:00	17.15
	3:30:00	18.42	11:30:00	18.43	19:30:00	17.19
	3:40:00	18.38	11:40:00	18.48	19:40:00	17.17
	3:50:00	18.36	11:50:00	18.53	19:50:00	17.15
	4:00:00	18.39	12:00:00	18.66	20:00:00	17.1
	4:10:00	18.34	12:10:00	18.77	20:10:00	17.03
	4:20:00	18.34	12:20:00	18.84	20:20:00	16.96
	4:30:00	18.36	12:30:00	18.95	20:30:00	16.98
	4:40:00	18.32	12:40:00	19.07	20:40:00	16.87
	4:50:00	18.3	12:50:00	19.22	20:50:00	16.89
	5:00:00	18.31	13:00:00	18.97	21:00:00	16.83
	5:10:00	18.27	13:10:00	18.67	21:10:00	16.89
	5:20:00	18.3	13:20:00	18.42	21:20:00	17.06
	5:30:00	18.27	13:30:00	18.14	21:30:00	17.53
	5:40:00	18.27	13:40:00	18.13	21:40:00	17.95
	5:50:00	18.25	13:50:00	18.09	21:50:00	18.17
	6:00:00	18.21	14:00:00	18.05	22:00:00	18.37
	6:10:00	18.22	14:10:00	17.95	22:10:00	18.54
	6:20:00	18.2	14:20:00	18.02	22:20:00	18.68
	6:30:00	18.2	14:30:00	17.99	22:30:00	18.75
6:40:00	18.2	14:40:00	17.9	22:40:00	18.82	
6:50:00	18.18	14:50:00	17.82	22:50:00	18.88	
7:00:00	18.18	15:00:00	17.86	23:00:00	18.91	
7:10:00	18.13	15:10:00	17.89	23:10:00	18.96	
7:20:00	18.13	15:20:00	17.91	23:20:00	19.02	
7:30:00	18.11	15:30:00	17.98	23:30:00	18.98	
7:40:00	18.15	15:40:00	18.07	23:40:00	19.03	
7:50:00	18.11	15:50:00	17.58	23:50:00	19.03	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/6/2008	0:00:00	19.01	8:00:00	18.19	16:00:00	17.3
	0:10:00	19.02	8:10:00	18.19	16:10:00	17.13
	0:20:00	19.05	8:20:00	18.26	16:20:00	17.19
	0:30:00	18.98	8:30:00	18.24	16:30:00	17.23
	0:40:00	19.01	8:40:00	18.24	16:40:00	17.14
	0:50:00	19.03	8:50:00	18.25	16:50:00	17.18
	1:00:00	18.99	9:00:00	18.27	17:00:00	17.25
	1:10:00	18.95	9:10:00	18.27	17:10:00	17.25
	1:20:00	18.97	9:20:00	18.35	17:20:00	17.13
	1:30:00	18.94	9:30:00	18.44	17:30:00	17.15
	1:40:00	18.94	9:40:00	18.45	17:40:00	17.19
	1:50:00	18.9	9:50:00	18.49	17:50:00	17.11
	2:00:00	18.9	10:00:00	18.63	18:00:00	17.1
	2:10:00	18.86	10:10:00	18.6	18:10:00	17.17
	2:20:00	18.85	10:20:00	18.66	18:20:00	17.29
	2:30:00	18.83	10:30:00	18.7	18:30:00	17.25
	2:40:00	18.82	10:40:00	18.81	18:40:00	17.18
	2:50:00	18.75	10:50:00	18.83	18:50:00	17.05
	3:00:00	18.79	11:00:00	18.89	19:00:00	17.07
	3:10:00	18.72	11:10:00	18.95	19:10:00	17.01
	3:20:00	18.72	11:20:00	19.14	19:20:00	17.1
	3:30:00	18.65	11:30:00	19.17	19:30:00	17.1
	3:40:00	18.63	11:40:00	19.26	19:40:00	16.92
	3:50:00	18.65	11:50:00	19.36	19:50:00	16.83
	4:00:00	18.58	12:00:00	19.49	20:00:00	16.73
	4:10:00	18.58	12:10:00	19.65	20:10:00	16.66
	4:20:00	18.55	12:20:00	19.73	20:20:00	16.8
	4:30:00	18.55	12:30:00	19.82	20:30:00	16.86
	4:40:00	18.48	12:40:00	19.88	20:40:00	16.88
	4:50:00	18.48	12:50:00	19.91	20:50:00	16.92
	5:00:00	18.5	13:00:00	20.01	21:00:00	16.92
	5:10:00	18.46	13:10:00	20.01	21:10:00	16.96
	5:20:00	18.44	13:20:00	20.14	21:20:00	17
	5:30:00	18.44	13:30:00	20.25	21:30:00	17.05
	5:40:00	18.42	13:40:00	20.36	21:40:00	17.07
	5:50:00	18.37	13:50:00	20.45	21:50:00	17.31
	6:00:00	18.32	14:00:00	20.55	22:00:00	17.72
	6:10:00	18.32	14:10:00	20.59	22:10:00	18.05
	6:20:00	18.35	14:20:00	20.68	22:20:00	18.3
	6:30:00	18.34	14:30:00	20.71	22:30:00	18.5
	6:40:00	18.35	14:40:00	20.76	22:40:00	18.62
	6:50:00	18.33	14:50:00	20.7	22:50:00	18.73
	7:00:00	18.26	15:00:00	20.63	23:00:00	18.84
	7:10:00	18.26	15:10:00	20.5	23:10:00	18.91
	7:20:00	18.26	15:20:00	20.38	23:20:00	19.01
	7:30:00	18.25	15:30:00	19.46	23:30:00	19.04
	7:40:00	18.2	15:40:00	18.43	23:40:00	19.1
	7:50:00	18.2	15:50:00	17.64	23:50:00	19.1

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/7/2008	0:00:00	19.15	8:00:00	18.68	16:00:00	17.07
	0:10:00	19.13	8:10:00	18.68	16:10:00	17.14
	0:20:00	19.2	8:20:00	18.67	16:20:00	17.27
	0:30:00	19.2	8:30:00	18.67	16:30:00	17.23
	0:40:00	19.16	8:40:00	18.69	16:40:00	17.05
	0:50:00	19.17	8:50:00	18.7	16:50:00	16.92
	1:00:00	19.2	9:00:00	18.72	17:00:00	16.89
	1:10:00	19.18	9:10:00	18.71	17:10:00	16.78
	1:20:00	19.2	9:20:00	18.75	17:20:00	16.7
	1:30:00	19.17	9:30:00	18.84	17:30:00	16.67
	1:40:00	19.16	9:40:00	18.9	17:40:00	16.65
	1:50:00	19.18	9:50:00	18.92	17:50:00	16.64
	2:00:00	19.21	10:00:00	18.91	18:00:00	16.64
	2:10:00	19.13	10:10:00	19.04	18:10:00	16.67
	2:20:00	19.14	10:20:00	19.1	18:20:00	16.72
	2:30:00	19.12	10:30:00	19.19	18:30:00	16.78
	2:40:00	19.1	10:40:00	19.21	18:40:00	16.83
	2:50:00	19.06	10:50:00	19.26	18:50:00	16.86
	3:00:00	19.12	11:00:00	19.27	19:00:00	16.8
	3:10:00	19.04	11:10:00	19.3	19:10:00	16.77
	3:20:00	19.05	11:20:00	19.33	19:20:00	16.75
	3:30:00	19.02	11:30:00	19.41	19:30:00	16.67
	3:40:00	18.99	11:40:00	19.6	19:40:00	16.57
	3:50:00	19.01	11:50:00	19.73	19:50:00	16.58
	4:00:00	19.01	12:00:00	19.76	20:00:00	16.67
	4:10:00	19.01	12:10:00	19.81	20:10:00	16.61
	4:20:00	19.01	12:20:00	19.8	20:20:00	16.65
	4:30:00	18.98	12:30:00	19.84	20:30:00	16.66
	4:40:00	18.98	12:40:00	19.88	20:40:00	16.79
	4:50:00	18.93	12:50:00	19.89	20:50:00	17.28
	5:00:00	18.91	13:00:00	19.84	21:00:00	17.75
	5:10:00	18.91	13:10:00	19.04	21:10:00	18.13
	5:20:00	18.91	13:20:00	17.71	21:20:00	18.39
	5:30:00	18.89	13:30:00	17.59	21:30:00	18.63
	5:40:00	18.88	13:40:00	17.51	21:40:00	18.81
	5:50:00	18.84	13:50:00	17.42	21:50:00	18.92
	6:00:00	18.82	14:00:00	17.39	22:00:00	19.02
	6:10:00	18.83	14:10:00	17.36	22:10:00	19.13
	6:20:00	18.81	14:20:00	17.26	22:20:00	19.19
	6:30:00	18.81	14:30:00	17.24	22:30:00	19.29
6:40:00	18.81	14:40:00	17.2	22:40:00	19.32	
6:50:00	18.75	14:50:00	17.23	22:50:00	19.41	
7:00:00	18.73	15:00:00	17.26	23:00:00	19.43	
7:10:00	18.72	15:10:00	17.2	23:10:00	19.51	
7:20:00	18.72	15:20:00	17.17	23:20:00	19.53	
7:30:00	18.72	15:30:00	17.15	23:30:00	19.58	
7:40:00	18.7	15:40:00	17.08	23:40:00	19.62	
7:50:00	18.68	15:50:00	17.07	23:50:00	19.57	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/8/2008	0:00:00	19.6	8:00:00	18.12	16:00:00	18.69
	0:10:00	19.53	8:10:00	18.06	16:10:00	18.68
	0:20:00	19.52	8:20:00	18.11	16:20:00	18.71
	0:30:00	19.5	8:30:00	18.09	16:30:00	18.67
	0:40:00	19.45	8:40:00	18.06	16:40:00	18.67
	0:50:00	19.41	8:50:00	18.07	16:50:00	18.63
	1:00:00	19.34	9:00:00	18.07	17:00:00	18.58
	1:10:00	19.31	9:10:00	18.09	17:10:00	18.54
	1:20:00	19.29	9:20:00	18.09	17:20:00	18.44
	1:30:00	19.22	9:30:00	18.14	17:30:00	18.15
	1:40:00	19.2	9:40:00	18.15	17:40:00	18.07
	1:50:00	19.2	9:50:00	18.19	17:50:00	18.08
	2:00:00	19.12	10:00:00	18.26	18:00:00	17.97
	2:10:00	19.09	10:10:00	18.25	18:10:00	17.98
	2:20:00	19.09	10:20:00	18.3	18:20:00	17.87
	2:30:00	19.04	10:30:00	18.35	18:30:00	17.85
	2:40:00	19.03	10:40:00	18.48	18:40:00	17.75
	2:50:00	19.02	10:50:00	18.49	18:50:00	17.67
	3:00:00	18.95	11:00:00	18.59	19:00:00	17.62
	3:10:00	18.94	11:10:00	18.67	19:10:00	17.6
	3:20:00	18.93	11:20:00	18.75	19:20:00	17.46
	3:30:00	18.86	11:30:00	18.88	19:30:00	17.4
	3:40:00	18.86	11:40:00	18.89	19:40:00	17.38
	3:50:00	18.81	11:50:00	18.95	19:50:00	17.3
	4:00:00	18.79	12:00:00	19.12	20:00:00	17.25
	4:10:00	18.75	12:10:00	19.32	20:10:00	17.17
	4:20:00	18.71	12:20:00	19.31	20:20:00	17.12
	4:30:00	18.68	12:30:00	19.39	20:30:00	17.08
	4:40:00	18.63	12:40:00	20.03	20:40:00	17.04
	4:50:00	18.61	12:50:00	19.73	20:50:00	17.01
	5:00:00	18.6	13:00:00	20.24	21:00:00	16.95
	5:10:00	18.54	13:10:00	19.6	21:10:00	16.9
	5:20:00	18.51	13:20:00	19.88	21:20:00	17.02
	5:30:00	18.49	13:30:00	19.98	21:30:00	17.36
	5:40:00	18.46	13:40:00	19.99	21:40:00	18
	5:50:00	18.43	13:50:00	20.03	21:50:00	18.54
	6:00:00	18.44	14:00:00	19.9	22:00:00	18.93
	6:10:00	18.41	14:10:00	18.98	22:10:00	19.22
	6:20:00	18.36	14:20:00	18.53	22:20:00	19.46
	6:30:00	18.39	14:30:00	18.42	22:30:00	19.65
	6:40:00	18.33	14:40:00	18.39	22:40:00	19.8
	6:50:00	18.31	14:50:00	18.45	22:50:00	20.01
	7:00:00	18.26	15:00:00	18.48	23:00:00	20.06
	7:10:00	18.24	15:10:00	18.51	23:10:00	20.15
	7:20:00	18.22	15:20:00	18.54	23:20:00	20.21
	7:30:00	18.22	15:30:00	18.58	23:30:00	20.26
	7:40:00	18.18	15:40:00	18.61	23:40:00	20.26
	7:50:00	18.15	15:50:00	18.65	23:50:00	20.26

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/9/2008	0:00:00	20.31	8:00:00	19.98	16:00:00	17.65
	0:10:00	20.36	8:10:00	19.96	16:10:00	17.53
	0:20:00	20.35	8:20:00	19.95	16:20:00	17.51
	0:30:00	20.36	8:30:00	20	16:30:00	17.52
	0:40:00	20.34	8:40:00	19.98	16:40:00	17.54
	0:50:00	20.38	8:50:00	19.98	16:50:00	17.61
	1:00:00	20.36	9:00:00	19.98	17:00:00	17.55
	1:10:00	20.36	9:10:00	19.98	17:10:00	17.51
	1:20:00	20.38	9:20:00	19.98	17:20:00	17.49
	1:30:00	20.36	9:30:00	19.93	17:30:00	17.41
	1:40:00	20.35	9:40:00	19.93	17:40:00	17.34
	1:50:00	20.37	9:50:00	19.96	17:50:00	17.3
	2:00:00	20.36	10:00:00	19.96	18:00:00	17.18
	2:10:00	20.35	10:10:00	19.96	18:10:00	17.16
	2:20:00	20.37	10:20:00	19.93	18:20:00	17.16
	2:30:00	20.35	10:30:00	19.96	18:30:00	17.16
	2:40:00	20.34	10:40:00	19.92	18:40:00	17.1
	2:50:00	20.31	10:50:00	19.98	18:50:00	17.11
	3:00:00	20.33	11:00:00	20.03	19:00:00	17.1
	3:10:00	20.32	11:10:00	19.99	19:10:00	16.99
	3:20:00	20.34	11:20:00	20	19:20:00	17.03
	3:30:00	20.32	11:30:00	19.99	19:30:00	16.99
	3:40:00	20.28	11:40:00	20.01	19:40:00	16.94
	3:50:00	20.31	11:50:00	19.96	19:50:00	16.92
	4:00:00	20.26	12:00:00	19.97	20:00:00	16.9
	4:10:00	20.26	12:10:00	19.99	20:10:00	16.94
	4:20:00	20.24	12:20:00	19.96	20:20:00	16.92
	4:30:00	20.24	12:30:00	19.98	20:30:00	16.87
	4:40:00	20.22	12:40:00	19.9	20:40:00	16.9
	4:50:00	20.23	12:50:00	19.91	20:50:00	16.89
	5:00:00	20.2	13:00:00	19.97	21:00:00	16.86
	5:10:00	20.21	13:10:00	19.98	21:10:00	16.86
	5:20:00	20.17	13:20:00	20.04	21:20:00	16.86
	5:30:00	20.16	13:30:00	19.93	21:30:00	16.91
	5:40:00	20.14	13:40:00	20.03	21:40:00	17.06
	5:50:00	20.13	13:50:00	19.98	21:50:00	17.47
	6:00:00	20.09	14:00:00	19.07	22:00:00	17.9
	6:10:00	20.1	14:10:00	18.05	22:10:00	18.29
	6:20:00	20.06	14:20:00	17.92	22:20:00	18.56
	6:30:00	20.06	14:30:00	17.71	22:30:00	18.81
	6:40:00	20.04	14:40:00	17.55	22:40:00	18.97
	6:50:00	20.04	14:50:00	17.54	22:50:00	19.12
	7:00:00	20.03	15:00:00	17.43	23:00:00	19.24
	7:10:00	20.03	15:10:00	17.4	23:10:00	19.32
	7:20:00	20	15:20:00	17.49	23:20:00	19.4
	7:30:00	20.01	15:30:00	17.51	23:30:00	19.45
	7:40:00	20.02	15:40:00	17.58	23:40:00	19.49
	7:50:00	19.97	15:50:00	17.63	23:50:00	19.5

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/10/2008	0:00:00	19.54	8:00:00	18.83	16:00:00	18.38
	0:10:00	19.58	8:10:00	18.8	16:10:00	18.45
	0:20:00	19.56	8:20:00	18.82	16:20:00	18.46
	0:30:00	19.56	8:30:00	18.83	16:30:00	18.45
	0:40:00	19.56	8:40:00	18.78	16:40:00	18.51
	0:50:00	19.56	8:50:00	18.82	16:50:00	18.53
	1:00:00	19.61	9:00:00	18.83	17:00:00	18.43
	1:10:00	19.56	9:10:00	18.84	17:10:00	18.47
	1:20:00	19.55	9:20:00	18.92	17:20:00	18.45
	1:30:00	19.57	9:30:00	18.88	17:30:00	18.43
	1:40:00	19.54	9:40:00	18.92	17:40:00	18.37
	1:50:00	19.54	9:50:00	18.99	17:50:00	18.36
	2:00:00	19.48	10:00:00	19.07	18:00:00	18.23
	2:10:00	19.54	10:10:00	19.09	18:10:00	18.09
	2:20:00	19.48	10:20:00	19.2	18:20:00	18.08
	2:30:00	19.45	10:30:00	19.29	18:30:00	18.03
	2:40:00	19.43	10:40:00	19.36	18:40:00	18.06
	2:50:00	19.41	10:50:00	19.46	18:50:00	18.07
	3:00:00	19.39	11:00:00	19.57	19:00:00	18.01
	3:10:00	19.37	11:10:00	19.67	19:10:00	18.02
	3:20:00	19.38	11:20:00	19.75	19:20:00	17.97
	3:30:00	19.34	11:30:00	19.87	19:30:00	18.02
	3:40:00	19.32	11:40:00	19.93	19:40:00	17.97
	3:50:00	19.27	11:50:00	20.06	19:50:00	17.9
	4:00:00	19.24	12:00:00	20.16	20:00:00	17.89
	4:10:00	19.21	12:10:00	20.28	20:10:00	18.12
	4:20:00	19.26	12:20:00	20.28	20:20:00	18.54
	4:30:00	19.27	12:30:00	20.41	20:30:00	18.86
	4:40:00	19.22	12:40:00	20.5	20:40:00	19.21
	4:50:00	19.17	12:50:00	20.62	20:50:00	19.5
	5:00:00	19.13	13:00:00	20.72	21:00:00	19.6
	5:10:00	19.12	13:10:00	20.76	21:10:00	19.71
	5:20:00	19.1	13:20:00	20.85	21:20:00	19.79
	5:30:00	19.09	13:30:00	20.91	21:30:00	19.9
	5:40:00	19.04	13:40:00	20.94	21:40:00	19.93
	5:50:00	19.04	13:50:00	20.87	21:50:00	19.91
	6:00:00	18.99	14:00:00	20.79	22:00:00	19.93
	6:10:00	18.99	14:10:00	19.56	22:10:00	20
	6:20:00	18.84	14:20:00	18.68	22:20:00	19.96
	6:30:00	18.92	14:30:00	18.47	22:30:00	19.95
	6:40:00	18.89	14:40:00	18.25	22:40:00	19.96
	6:50:00	18.89	14:50:00	18.22	22:50:00	19.93
	7:00:00	18.89	15:00:00	18.3	23:00:00	19.92
	7:10:00	18.85	15:10:00	18.3	23:10:00	19.92
	7:20:00	18.84	15:20:00	18.25	23:20:00	19.87
	7:30:00	18.82	15:30:00	18.34	23:30:00	19.89
	7:40:00	18.79	15:40:00	18.38	23:40:00	19.89
	7:50:00	18.78	15:50:00	18.49	23:50:00	19.85



## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/11/2008	0:00:00	19.85	8:00:00	18.63	16:00:00	18.78
	0:10:00	19.82	8:10:00	18.61	16:10:00	18.88
	0:20:00	19.78	8:20:00	18.59	16:20:00	18.75
	0:30:00	19.78	8:30:00	18.59	16:30:00	18.73
	0:40:00	19.77	8:40:00	18.57	16:40:00	18.71
	0:50:00	19.74	8:50:00	18.61	16:50:00	18.75
	1:00:00	19.74	9:00:00	18.66	17:00:00	18.65
	1:10:00	19.68	9:10:00	18.72	17:10:00	18.56
	1:20:00	19.68	9:20:00	18.79	17:20:00	18.58
	1:30:00	19.63	9:30:00	18.83	17:30:00	18.56
	1:40:00	19.63	9:40:00	18.9	17:40:00	18.59
	1:50:00	19.58	9:50:00	18.96	17:50:00	18.43
	2:00:00	19.58	10:00:00	19.01	18:00:00	18.34
	2:10:00	19.52	10:10:00	19.08	18:10:00	18.12
	2:20:00	19.51	10:20:00	19.14	18:20:00	17.98
	2:30:00	19.5	10:30:00	19.21	18:30:00	17.92
	2:40:00	19.41	10:40:00	19.34	18:40:00	17.87
	2:50:00	19.4	10:50:00	19.39	18:50:00	17.75
	3:00:00	19.37	11:00:00	19.52	19:00:00	17.77
	3:10:00	19.36	11:10:00	19.69	19:10:00	17.66
	3:20:00	19.33	11:20:00	19.82	19:20:00	17.58
	3:30:00	19.26	11:30:00	19.96	19:30:00	17.52
	3:40:00	19.25	11:40:00	20.09	19:40:00	17.43
	3:50:00	19.2	11:50:00	20.26	19:50:00	17.39
	4:00:00	19.2	12:00:00	20.37	20:00:00	17.3
	4:10:00	19.15	12:10:00	20.6	20:10:00	17.28
	4:20:00	19.09	12:20:00	20.73	20:20:00	17.2
	4:30:00	19.07	12:30:00	20.98	20:30:00	17.2
	4:40:00	19.05	12:40:00	21.75	20:40:00	17.16
	4:50:00	19.03	12:50:00	21.46	20:50:00	17.05
	5:00:00	18.98	13:00:00	21.33	21:00:00	17.01
	5:10:00	18.98	13:10:00	20.11	21:10:00	17.03
	5:20:00	18.94	13:20:00	19.07	21:20:00	17.04
	5:30:00	18.91	13:30:00	19.09	21:30:00	17.07
	5:40:00	18.84	13:40:00	19.14	21:40:00	17.07
	5:50:00	18.84	13:50:00	18.54	21:50:00	17.12
	6:00:00	18.78	14:00:00	18.54	22:00:00	17.12
	6:10:00	18.75	14:10:00	18.62	22:10:00	17.18
	6:20:00	18.75	14:20:00	18.58	22:20:00	17.18
	6:30:00	18.71	14:30:00	18.69	22:30:00	17.23
	6:40:00	18.69	14:40:00	18.69	22:40:00	17.31
	6:50:00	18.62	14:50:00	18.73	22:50:00	17.61
	7:00:00	18.61	15:00:00	18.78	23:00:00	17.95
	7:10:00	18.63	15:10:00	18.75	23:10:00	18.34
	7:20:00	18.63	15:20:00	18.71	23:20:00	18.66
	7:30:00	18.6	15:30:00	18.79	23:30:00	18.9
	7:40:00	18.6	15:40:00	18.85	23:40:00	19.09
	7:50:00	18.6	15:50:00	18.84	23:50:00	19.31

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/12/2008	0:00:00	19.46	8:00:00	19.51	16:00:00	20.05
	0:10:00	19.57	8:10:00	19.48	16:10:00	20.2
	0:20:00	19.66	8:20:00	19.5	16:20:00	20.31
	0:30:00	19.73	8:30:00	19.5	16:30:00	20.55
	0:40:00	19.8	8:40:00	19.54	16:40:00	20.72
	0:50:00	19.87	8:50:00	19.6	16:50:00	20.89
	1:00:00	19.93	9:00:00	19.63	17:00:00	20.93
	1:10:00	19.96	9:10:00	19.69	17:10:00	21.1
	1:20:00	19.98	9:20:00	19.76	17:20:00	21.41
	1:30:00	20.03	9:30:00	19.76	17:30:00	21.35
	1:40:00	20.04	9:40:00	19.89	17:40:00	21.42
	1:50:00	20.04	9:50:00	19.97	17:50:00	21.92
	2:00:00	20.06	10:00:00	20.04	18:00:00	22.85
	2:10:00	20.1	10:10:00	20.19	18:10:00	23.37
	2:20:00	20.08	10:20:00	20.27	18:20:00	23.3
	2:30:00	20.05	10:30:00	20.37	18:30:00	21.81
	2:40:00	20.08	10:40:00	20.46	18:40:00	20.39
	2:50:00	20.05	10:50:00	20.58	18:50:00	19.54
	3:00:00	20.02	11:00:00	20.7	19:00:00	18.95
	3:10:00	20.03	11:10:00	20.86	19:10:00	18.62
	3:20:00	20.01	11:20:00	21.02	19:20:00	18.36
	3:30:00	19.99	11:30:00	21.15	19:30:00	18.14
	3:40:00	19.99	11:40:00	21.28	19:40:00	18.01
	3:50:00	19.93	11:50:00	21.44	19:50:00	18.01
	4:00:00	19.91	12:00:00	21.62	20:00:00	18.03
	4:10:00	19.93	12:10:00	21.85	20:10:00	18.03
	4:20:00	19.89	12:20:00	22.09	20:20:00	18.1
	4:30:00	19.91	12:30:00	22.18	20:30:00	18.11
	4:40:00	19.86	12:40:00	22.25	20:40:00	18.12
	4:50:00	19.81	12:50:00	22.53	20:50:00	18.13
	5:00:00	19.85	13:00:00	22.66	21:00:00	18.17
	5:10:00	19.8	13:10:00	22.73	21:10:00	18.15
	5:20:00	19.82	13:20:00	21	21:20:00	18.2
	5:30:00	19.76	13:30:00	19.85	21:30:00	18.18
	5:40:00	19.74	13:40:00	19.82	21:40:00	18.19
	5:50:00	19.74	13:50:00	19.62	21:50:00	18.21
	6:00:00	19.67	14:00:00	19.34	22:00:00	18.35
	6:10:00	19.63	14:10:00	19.34	22:10:00	18.7
	6:20:00	19.66	14:20:00	19.45	22:20:00	19.08
	6:30:00	19.61	14:30:00	19.34	22:30:00	19.41
	6:40:00	19.6	14:40:00	19.41	22:40:00	19.8
	6:50:00	19.6	14:50:00	19.5	22:50:00	20.06
	7:00:00	19.55	15:00:00	19.54	23:00:00	20.32
	7:10:00	19.56	15:10:00	19.56	23:10:00	20.56
	7:20:00	19.55	15:20:00	19.5	23:20:00	20.73
	7:30:00	19.52	15:30:00	19.64	23:30:00	20.85
	7:40:00	19.5	15:40:00	19.73	23:40:00	20.96
	7:50:00	19.53	15:50:00	19.9	23:50:00	21.09

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/13/2008	0:00:00	21.18	8:00:00	20.98	16:00:00	24.19
	0:10:00	21.27	8:10:00	21	16:10:00	24.34
	0:20:00	21.31	8:20:00	21.05	16:20:00	24.41
	0:30:00	21.33	8:30:00	21.07	16:30:00	24.34
	0:40:00	21.42	8:40:00	21.07	16:40:00	24.39
	0:50:00	21.44	8:50:00	21.09	16:50:00	24.39
	1:00:00	21.48	9:00:00	21.2	17:00:00	24.39
	1:10:00	21.48	9:10:00	21.24	17:10:00	24.3
	1:20:00	21.48	9:20:00	21.31	17:20:00	24.24
	1:30:00	21.51	9:30:00	21.29	17:30:00	24.24
	1:40:00	21.53	9:40:00	21.33	17:40:00	24.19
	1:50:00	21.53	9:50:00	21.4	17:50:00	24.08
	2:00:00	21.53	10:00:00	21.52	18:00:00	24.13
	2:10:00	21.51	10:10:00	21.57	18:10:00	24.02
	2:20:00	21.53	10:20:00	21.66	18:20:00	23.91
	2:30:00	21.55	10:30:00	21.88	18:30:00	23.82
	2:40:00	21.51	10:40:00	22.07	18:40:00	23.73
	2:50:00	21.53	10:50:00	22.16	18:50:00	23.67
	3:00:00	21.55	11:00:00	22.29	19:00:00	23.6
	3:10:00	21.51	11:10:00	22.29	19:10:00	23.58
	3:20:00	21.57	11:20:00	22.28	19:20:00	23.52
	3:30:00	21.53	11:30:00	22.33	19:30:00	23.48
	3:40:00	21.51	11:40:00	22.27	19:40:00	23.41
	3:50:00	21.48	11:50:00	22.51	19:50:00	23.36
	4:00:00	21.48	12:00:00	22.77	20:00:00	23.32
	4:10:00	21.48	12:10:00	22.94	20:10:00	23.3
	4:20:00	21.46	12:20:00	23.12	20:20:00	23.23
	4:30:00	21.42	12:30:00	23.36	20:30:00	23.19
	4:40:00	21.4	12:40:00	23.47	20:40:00	23.1
	4:50:00	21.4	12:50:00	23.54	20:50:00	23.01
	5:00:00	21.4	13:00:00	23.61	21:00:00	23.01
	5:10:00	21.4	13:10:00	23.64	21:10:00	22.93
	5:20:00	21.35	13:20:00	23.62	21:20:00	22.86
	5:30:00	21.35	13:30:00	23.64	21:30:00	22.78
	5:40:00	21.29	13:40:00	23.71	21:40:00	22.72
	5:50:00	21.31	13:50:00	23.77	21:50:00	22.7
	6:00:00	21.27	14:00:00	23.78	22:00:00	22.58
	6:10:00	21.22	14:10:00	23.84	22:10:00	22.49
	6:20:00	21.2	14:20:00	23.78	22:20:00	22.4
	6:30:00	21.18	14:30:00	23.91	22:30:00	22.31
	6:40:00	21.16	14:40:00	23.91	22:40:00	22.29
	6:50:00	21.11	14:50:00	23.97	22:50:00	22.2
	7:00:00	21.09	15:00:00	23.93	23:00:00	22.18
	7:10:00	21.07	15:10:00	24.18	23:10:00	22.11
	7:20:00	21.07	15:20:00	24.18	23:20:00	22.07
	7:30:00	21.03	15:30:00	24.17	23:30:00	22.01
	7:40:00	21.05	15:40:00	24.15	23:40:00	21.96
	7:50:00	21	15:50:00	24.17	23:50:00	21.92

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/14/2008	0:00:00	21.88	8:00:00	19.66	16:00:00	18.37
	0:10:00	21.88	8:10:00	19.67	16:10:00	18.33
	0:20:00	21.81	8:20:00	19.62	16:20:00	18.36
	0:30:00	21.77	8:30:00	19.63	16:30:00	18.41
	0:40:00	21.7	8:40:00	19.66	16:40:00	18.32
	0:50:00	21.68	8:50:00	19.65	16:50:00	18.26
	1:00:00	21.64	9:00:00	19.72	17:00:00	18.23
	1:10:00	21.61	9:10:00	19.75	17:10:00	18.14
	1:20:00	21.53	9:20:00	19.85	17:20:00	18.08
	1:30:00	21.52	9:30:00	19.87	17:30:00	18.01
	1:40:00	21.45	9:40:00	19.96	17:40:00	18.06
	1:50:00	21.35	9:50:00	20	17:50:00	18.14
	2:00:00	21.31	10:00:00	20.09	18:00:00	18.1
	2:10:00	21.26	10:10:00	20.15	18:10:00	18.1
	2:20:00	21.2	10:20:00	20.22	18:20:00	18.05
	2:30:00	21.19	10:30:00	20.31	18:30:00	17.95
	2:40:00	21.12	10:40:00	20.41	18:40:00	17.96
	2:50:00	21.05	10:50:00	20.51	18:50:00	17.91
	3:00:00	21.02	11:00:00	20.59	19:00:00	17.89
	3:10:00	20.92	11:10:00	20.76	19:10:00	17.76
	3:20:00	20.89	11:20:00	20.87	19:20:00	17.76
	3:30:00	20.81	11:30:00	20.87	19:30:00	17.64
	3:40:00	20.79	11:40:00	20.93	19:40:00	17.6
	3:50:00	20.72	11:50:00	20.97	19:50:00	17.51
	4:00:00	20.7	12:00:00	21.13	20:00:00	17.55
	4:10:00	20.67	12:10:00	21.24	20:10:00	17.47
	4:20:00	20.58	12:20:00	21.36	20:20:00	17.51
	4:30:00	20.49	12:30:00	21.44	20:30:00	17.49
	4:40:00	20.44	12:40:00	21.57	20:40:00	17.47
	4:50:00	20.39	12:50:00	21.72	20:50:00	17.44
	5:00:00	20.33	13:00:00	22.04	21:00:00	17.4
	5:10:00	20.31	13:10:00	21.94	21:10:00	17.4
	5:20:00	20.28	13:20:00	21.38	21:20:00	17.4
	5:30:00	20.25	13:30:00	19.43	21:30:00	17.42
	5:40:00	20.19	13:40:00	18.83	21:40:00	17.38
	5:50:00	20.14	13:50:00	18.69	21:50:00	17.4
	6:00:00	20.13	14:00:00	18.59	22:00:00	17.31
	6:10:00	20	14:10:00	18.39	22:10:00	17.36
	6:20:00	19.98	14:20:00	18.35	22:20:00	17.42
	6:30:00	19.93	14:30:00	18.39	22:30:00	17.55
	6:40:00	19.9	14:40:00	18.38	22:40:00	17.77
	6:50:00	19.88	14:50:00	18.41	22:50:00	17.95
	7:00:00	19.78	15:00:00	18.38	23:00:00	18.19
	7:10:00	19.76	15:10:00	18.3	23:10:00	18.42
	7:20:00	19.8	15:20:00	18.33	23:20:00	18.61
	7:30:00	19.74	15:30:00	18.39	23:30:00	18.72
	7:40:00	19.69	15:40:00	18.41	23:40:00	18.86
	7:50:00	19.69	15:50:00	18.49	23:50:00	19.01

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/15/2008	0:00:00	19.07	8:00:00	18.07	16:00:00	24.85
	0:10:00	19.15	8:10:00	18.02	16:10:00	24.8
	0:20:00	19.24	8:20:00	18.07	16:20:00	25.09
	0:30:00	19.25	8:30:00	18.09	16:30:00	25.07
	0:40:00	19.31	8:40:00	18.08	16:40:00	25.04
	0:50:00	19.3	8:50:00	18.12	16:50:00	25.25
	1:00:00	19.32	9:00:00	18.19	17:00:00	25.24
	1:10:00	19.3	9:10:00	18.23	17:10:00	25.39
	1:20:00	19.36	9:20:00	18.3	17:20:00	25.44
	1:30:00	19.34	9:30:00	18.38	17:30:00	25.48
	1:40:00	19.38	9:40:00	18.51	17:40:00	25.35
	1:50:00	19.32	9:50:00	18.6	17:50:00	25.2
	2:00:00	19.32	10:00:00	18.73	18:00:00	25.11
	2:10:00	19.3	10:10:00	18.86	18:10:00	24.98
	2:20:00	19.28	10:20:00	18.95	18:20:00	24.87
	2:30:00	19.25	10:30:00	19.02	18:30:00	24.8
	2:40:00	19.26	10:40:00	19.13	18:40:00	24.66
	2:50:00	19.21	10:50:00	19.24	18:50:00	24.62
	3:00:00	19.18	11:00:00	19.37	19:00:00	24.56
	3:10:00	19.16	11:10:00	19.61	19:10:00	24.43
	3:20:00	19.1	11:20:00	19.74	19:20:00	24.37
	3:30:00	19.07	11:30:00	19.85	19:30:00	24.19
	3:40:00	19.05	11:40:00	19.87	19:40:00	24.12
	3:50:00	19.03	11:50:00	19.98	19:50:00	23.89
	4:00:00	18.98	12:00:00	20.28	20:00:00	23.77
	4:10:00	18.95	12:10:00	20.52	20:10:00	23.58
	4:20:00	18.91	12:20:00	20.76	20:20:00	23.44
	4:30:00	18.82	12:30:00	20.79	20:30:00	23.22
	4:40:00	18.81	12:40:00	21.08	20:40:00	23.07
	4:50:00	18.73	12:50:00	21.39	20:50:00	22.83
	5:00:00	18.7	13:00:00	22.4	21:00:00	22.64
	5:10:00	18.67	13:10:00	21.76	21:10:00	22.51
	5:20:00	18.63	13:20:00	22.55	21:20:00	22.35
	5:30:00	18.6	13:30:00	22.79	21:30:00	22.2
	5:40:00	18.55	13:40:00	22.6	21:40:00	22.07
	5:50:00	18.51	13:50:00	22.69	21:50:00	21.9
	6:00:00	18.46	14:00:00	22.95	22:00:00	21.83
	6:10:00	18.41	14:10:00	23.22	22:10:00	21.7
	6:20:00	18.37	14:20:00	23.45	22:20:00	21.53
	6:30:00	18.27	14:30:00	23.67	22:30:00	21.44
	6:40:00	18.27	14:40:00	23.95	22:40:00	21.29
	6:50:00	18.23	14:50:00	24.17	22:50:00	21.2
	7:00:00	18.18	15:00:00	24.32	23:00:00	21.11
	7:10:00	18.14	15:10:00	24.48	23:10:00	20.98
	7:20:00	18.06	15:20:00	24.63	23:20:00	20.89
	7:30:00	18.06	15:30:00	24.71	23:30:00	20.79
	7:40:00	18.06	15:40:00	24.79	23:40:00	20.7
	7:50:00	18.07	15:50:00	24.73	23:50:00	20.62

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/16/2008	0:00:00	20.52	8:00:00	17.96	16:00:00	19.72
	0:10:00	20.45	8:10:00	17.98	16:10:00	19.74
	0:20:00	20.34	8:20:00	17.95	16:20:00	19.82
	0:30:00	20.27	8:30:00	17.96	16:30:00	19.82
	0:40:00	20.2	8:40:00	17.99	16:40:00	19.8
	0:50:00	20.1	8:50:00	17.99	16:50:00	19.82
	1:00:00	20.01	9:00:00	18.06	17:00:00	19.89
	1:10:00	19.95	9:10:00	18.12	17:10:00	19.87
	1:20:00	19.88	9:20:00	18.27	17:20:00	19.67
	1:30:00	19.81	9:30:00	18.27	17:30:00	19.52
	1:40:00	19.74	9:40:00	18.47	17:40:00	19.3
	1:50:00	19.68	9:50:00	18.62	17:50:00	19.24
	2:00:00	19.61	10:00:00	18.71	18:00:00	18.91
	2:10:00	19.52	10:10:00	18.86	18:10:00	18.73
	2:20:00	19.52	10:20:00	18.99	18:20:00	18.45
	2:30:00	19.41	10:30:00	19.1	18:30:00	18.23
	2:40:00	19.34	10:40:00	19.2	18:40:00	18.03
	2:50:00	19.3	10:50:00	19.33	18:50:00	17.88
	3:00:00	19.28	11:00:00	19.53	19:00:00	17.73
	3:10:00	19.21	11:10:00	19.72	19:10:00	17.51
	3:20:00	19.18	11:20:00	19.93	19:20:00	17.6
	3:30:00	19.06	11:30:00	20.11	19:30:00	17.47
	3:40:00	19.04	11:40:00	20.34	19:40:00	17.4
	3:50:00	19.03	11:50:00	20.57	19:50:00	17.4
	4:00:00	18.96	12:00:00	20.72	20:00:00	17.25
	4:10:00	18.9	12:10:00	21.4	20:10:00	17.2
	4:20:00	18.86	12:20:00	21.93	20:20:00	17.18
	4:30:00	18.82	12:30:00	22.11	20:30:00	17.25
	4:40:00	18.74	12:40:00	22.43	20:40:00	17.22
	4:50:00	18.69	12:50:00	22.78	20:50:00	17.22
	5:00:00	18.66	13:00:00	23.04	21:00:00	17.17
	5:10:00	18.61	13:10:00	22.96	21:10:00	17.16
	5:20:00	18.51	13:20:00	23.26	21:20:00	17.14
	5:30:00	18.51	13:30:00	23.33	21:30:00	17.12
	5:40:00	18.49	13:40:00	22.99	21:40:00	17.14
	5:50:00	18.41	13:50:00	23.23	21:50:00	17.14
	6:00:00	18.35	14:00:00	23.42	22:00:00	17.1
	6:10:00	18.35	14:10:00	23.71	22:10:00	17.15
	6:20:00	18.26	14:20:00	23.86	22:20:00	17.12
	6:30:00	18.22	14:30:00	24	22:30:00	17.14
	6:40:00	18.2	14:40:00	23.67	22:40:00	17.12
	6:50:00	18.15	14:50:00	22.42	22:50:00	17.15
	7:00:00	18.13	15:00:00	20.48	23:00:00	17.07
	7:10:00	18.03	15:10:00	20.14	23:10:00	17.1
	7:20:00	18.03	15:20:00	20	23:20:00	17.1
	7:30:00	17.99	15:30:00	19.85	23:30:00	17.11
	7:40:00	18	15:40:00	19.78	23:40:00	17.1
	7:50:00	17.98	15:50:00	19.72	23:50:00	17.07



## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/17/2008	0:00:00	17.05	8:00:00	18.95	16:00:00	19.72
	0:10:00	17.1	8:10:00	18.99	16:10:00	19.63
	0:20:00	17.16	8:20:00	18.95	16:20:00	19.46
	0:30:00	17.27	8:30:00	18.99	16:30:00	19.41
	0:40:00	17.42	8:40:00	19.06	16:40:00	19.32
	0:50:00	17.58	8:50:00	19.13	16:50:00	19.45
	1:00:00	17.73	9:00:00	19.26	17:00:00	19.45
	1:10:00	17.92	9:10:00	19.28	17:10:00	19.52
	1:20:00	18.08	9:20:00	19.39	17:20:00	19.74
	1:30:00	18.21	9:30:00	19.52	17:30:00	19.82
	1:40:00	18.36	9:40:00	19.67	17:40:00	19.96
	1:50:00	18.47	9:50:00	19.76	17:50:00	20.09
	2:00:00	18.6	10:00:00	19.8	18:00:00	20.2
	2:10:00	18.69	10:10:00	19.98	18:10:00	20.28
	2:20:00	18.75	10:20:00	20.06	18:20:00	20.41
	2:30:00	18.84	10:30:00	20.22	18:30:00	20.52
	2:40:00	18.91	10:40:00	20.37	18:40:00	20.62
	2:50:00	18.95	10:50:00	20.52	18:50:00	20.7
	3:00:00	19.04	11:00:00	20.65	19:00:00	20.76
	3:10:00	19.08	11:10:00	20.81	19:10:00	20.83
	3:20:00	19.06	11:20:00	21.07	19:20:00	20.84
	3:30:00	19.1	11:30:00	21.3	19:30:00	20.72
	3:40:00	19.13	11:40:00	21.44	19:40:00	20.74
	3:50:00	19.13	11:50:00	21.66	19:50:00	20.63
	4:00:00	19.15	12:00:00	21.83	20:00:00	20.63
	4:10:00	19.15	12:10:00	22.07	20:10:00	20.55
	4:20:00	19.17	12:20:00	22.27	20:20:00	20.6
	4:30:00	19.17	12:30:00	22.42	20:30:00	20.61
	4:40:00	19.17	12:40:00	23.21	20:40:00	20.65
	4:50:00	19.19	12:50:00	24.13	20:50:00	20.71
	5:00:00	19.17	13:00:00	25.57	21:00:00	20.83
	5:10:00	19.15	13:10:00	25.72	21:10:00	20.96
	5:20:00	19.15	13:20:00	25.95	21:20:00	21.12
	5:30:00	19.1	13:30:00	25.99	21:30:00	21.24
	5:40:00	19.13	13:40:00	24.17	21:40:00	21.31
	5:50:00	19.08	13:50:00	25.66	21:50:00	21.46
	6:00:00	19.06	14:00:00	25.82	22:00:00	21.55
	6:10:00	19.1	14:10:00	26.19	22:10:00	21.62
	6:20:00	19.02	14:20:00	25.42	22:20:00	21.68
	6:30:00	18.99	14:30:00	25.94	22:30:00	21.68
6:40:00	18.95	14:40:00	25.53	22:40:00	21.75	
6:50:00	18.97	14:50:00	24.39	22:50:00	21.77	
7:00:00	18.95	15:00:00	22.74	23:00:00	21.79	
7:10:00	18.93	15:10:00	21.09	23:10:00	21.8	
7:20:00	18.91	15:20:00	20.62	23:20:00	21.79	
7:30:00	18.93	15:30:00	20.27	23:30:00	21.81	
7:40:00	18.93	15:40:00	20.14	23:40:00	21.78	
7:50:00	18.93	15:50:00	19.97	23:50:00	21.77	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/18/2008	0:00:00	21.77	8:00:00	20.33	16:00:00	19.61
	0:10:00	21.76	8:10:00	20.31	16:10:00	19.69
	0:20:00	21.74	8:20:00	20.37	16:20:00	19.69
	0:30:00	21.74	8:30:00	20.33	16:30:00	19.63
	0:40:00	21.71	8:40:00	20.37	16:40:00	19.63
	0:50:00	21.65	8:50:00	20.39	16:50:00	19.78
	1:00:00	21.64	9:00:00	20.48	17:00:00	19.69
	1:10:00	21.62	9:10:00	20.55	17:10:00	19.61
	1:20:00	21.55	9:20:00	20.65	17:20:00	19.48
	1:30:00	21.55	9:30:00	20.76	17:30:00	19.19
	1:40:00	21.51	9:40:00	20.85	17:40:00	19.17
	1:50:00	21.48	9:50:00	20.96	17:50:00	19.08
	2:00:00	21.42	10:00:00	21.09	18:00:00	18.75
	2:10:00	21.42	10:10:00	21.19	18:10:00	18.6
	2:20:00	21.38	10:20:00	21.33	18:20:00	18.47
	2:30:00	21.33	10:30:00	21.45	18:30:00	18.26
	2:40:00	21.31	10:40:00	21.59	18:40:00	17.98
	2:50:00	21.29	10:50:00	21.77	18:50:00	17.84
	3:00:00	21.26	11:00:00	21.89	19:00:00	17.64
	3:10:00	21.3	11:10:00	22.04	19:10:00	17.6
	3:20:00	21.18	11:20:00	22.18	19:20:00	17.56
	3:30:00	21.17	11:30:00	22.32	19:30:00	17.56
	3:40:00	21.15	11:40:00	22.58	19:40:00	17.53
	3:50:00	21.12	11:50:00	23.23	19:50:00	17.53
	4:00:00	21.05	12:00:00	23.5	20:00:00	17.49
	4:10:00	21.04	12:10:00	24.16	20:10:00	17.49
	4:20:00	20.98	12:20:00	24.68	20:20:00	17.44
	4:30:00	20.96	12:30:00	24.38	20:30:00	17.42
	4:40:00	20.85	12:40:00	24.77	20:40:00	17.36
	4:50:00	20.87	12:50:00	25.03	20:50:00	17.36
	5:00:00	20.83	13:00:00	25.01	21:00:00	17.31
	5:10:00	20.79	13:10:00	25.53	21:10:00	17.31
	5:20:00	20.72	13:20:00	25.12	21:20:00	17.29
	5:30:00	20.72	13:30:00	22.76	21:30:00	17.31
	5:40:00	20.72	13:40:00	21.52	21:40:00	17.3
	5:50:00	20.65	13:50:00	19.85	21:50:00	17.27
	6:00:00	20.61	14:00:00	20.28	22:00:00	17.27
	6:10:00	20.63	14:10:00	19.79	22:10:00	17.31
	6:20:00	20.57	14:20:00	19.76	22:20:00	17.3
	6:30:00	20.55	14:30:00	19.89	22:30:00	17.31
	6:40:00	20.52	14:40:00	19.48	22:40:00	17.27
	6:50:00	20.44	14:50:00	19.48	22:50:00	17.29
	7:00:00	20.41	15:00:00	19.52	23:00:00	17.35
	7:10:00	20.41	15:10:00	19.52	23:10:00	17.44
	7:20:00	20.41	15:20:00	19.61	23:20:00	17.64
	7:30:00	20.39	15:30:00	19.54	23:30:00	17.86
	7:40:00	20.35	15:40:00	19.65	23:40:00	18.06
	7:50:00	20.31	15:50:00	19.65	23:50:00	18.3



# SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/19/2008	0:00:00	18.54	8:00:00	19.34	16:00:00	20.04
	0:10:00	18.68	8:10:00	19.39	16:10:00	20.17
	0:20:00	18.82	8:20:00	19.48	16:20:00	20.35
	0:30:00	18.97	8:30:00	19.5	16:30:00	20.48
	0:40:00	19.06	8:40:00	19.58	16:40:00	20.72
	0:50:00	19.15	8:50:00	19.67	16:50:00	20.76
	1:00:00	19.26	9:00:00	19.74	17:00:00	21
	1:10:00	19.37	9:10:00	19.96	17:10:00	21.24
	1:20:00	19.38	9:20:00	20.06	17:20:00	21.4
	1:30:00	19.44	9:30:00	20.24	17:30:00	21.48
	1:40:00	19.46	9:40:00	20.35	17:40:00	21.66
	1:50:00	19.49	9:50:00	20.5	17:50:00	21.78
	2:00:00	19.5	10:00:00	20.65	18:00:00	21.9
	2:10:00	19.51	10:10:00	20.81	18:10:00	21.99
	2:20:00	19.5	10:20:00	20.96	18:20:00	22.12
	2:30:00	19.5	10:30:00	21.16	18:30:00	22.25
	2:40:00	19.43	10:40:00	21.31	18:40:00	22.29
	2:50:00	19.41	10:50:00	21.53	18:50:00	22.42
	3:00:00	19.37	11:00:00	21.66	19:00:00	22.4
	3:10:00	19.34	11:10:00	21.82	19:10:00	22.46
	3:20:00	19.33	11:20:00	22	19:20:00	22.4
	3:30:00	19.28	11:30:00	22.19	19:30:00	22.41
	3:40:00	19.28	11:40:00	22.46	19:40:00	22.36
	3:50:00	19.22	11:50:00	22.64	19:50:00	22.31
	4:00:00	19.18	12:00:00	22.84	20:00:00	22.31
	4:10:00	19.15	12:10:00	23.01	20:10:00	22.27
	4:20:00	19.16	12:20:00	24.37	20:20:00	22.29
	4:30:00	19.07	12:30:00	24.97	20:30:00	22.34
	4:40:00	19.08	12:40:00	25.34	20:40:00	22.36
	4:50:00	19.02	12:50:00	25.45	20:50:00	22.4
	5:00:00	18.95	13:00:00	24.57	21:00:00	22.38
	5:10:00	18.93	13:10:00	23.97	21:10:00	22.42
	5:20:00	18.86	13:20:00	23.66	21:20:00	22.47
	5:30:00	18.86	13:30:00	21.69	21:30:00	22.47
	5:40:00	18.82	13:40:00	20.32	21:40:00	22.53
	5:50:00	18.89	13:50:00	20.45	21:50:00	22.53
	6:00:00	18.93	14:00:00	20.04	22:00:00	22.55
	6:10:00	18.92	14:10:00	20.02	22:10:00	22.55
	6:20:00	18.97	14:20:00	19.74	22:20:00	22.53
	6:30:00	19.02	14:30:00	19.76	22:30:00	22.53
6:40:00	18.99	14:40:00	19.74	22:40:00	22.51	
6:50:00	19.08	14:50:00	19.63	22:50:00	22.49	
7:00:00	19.13	15:00:00	19.67	23:00:00	22.47	
7:10:00	19.15	15:10:00	19.72	23:10:00	22.49	
7:20:00	19.19	15:20:00	19.76	23:20:00	22.42	
7:30:00	19.27	15:30:00	19.84	23:30:00	22.38	
7:40:00	19.28	15:40:00	19.85	23:40:00	22.38	
7:50:00	19.3	15:50:00	20	23:50:00	22.31	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/20/2008	0:00:00	22.27	8:00:00	19.82	16:00:00	20.34
	0:10:00	22.18	8:10:00	19.85	16:10:00	20.22
	0:20:00	22.16	8:20:00	19.92	16:20:00	20.28
	0:30:00	22.1	8:30:00	19.89	16:30:00	20.2
	0:40:00	22.03	8:40:00	19.93	16:40:00	20.17
	0:50:00	22.01	8:50:00	19.96	16:50:00	20.11
	1:00:00	21.96	9:00:00	20.02	17:00:00	20.13
	1:10:00	21.86	9:10:00	20.17	17:10:00	20.09
	1:20:00	21.81	9:20:00	20.26	17:20:00	20.11
	1:30:00	21.79	9:30:00	20.33	17:30:00	20.11
	1:40:00	21.68	9:40:00	20.44	17:40:00	20.04
	1:50:00	21.68	9:50:00	20.5	17:50:00	20.04
	2:00:00	21.61	10:00:00	20.68	18:00:00	20.04
	2:10:00	21.54	10:10:00	20.83	18:10:00	20.21
	2:20:00	21.5	10:20:00	20.94	18:20:00	20.25
	2:30:00	21.43	10:30:00	21.08	18:30:00	20.32
	2:40:00	21.35	10:40:00	21.24	18:40:00	20.31
	2:50:00	21.31	10:50:00	21.45	18:50:00	20.28
	3:00:00	21.24	11:00:00	21.64	19:00:00	20.28
	3:10:00	21.18	11:10:00	21.77	19:10:00	20.24
	3:20:00	21.11	11:20:00	21.97	19:20:00	20.26
	3:30:00	21.07	11:30:00	22.15	19:30:00	20.26
	3:40:00	20.99	11:40:00	22.29	19:40:00	20.22
	3:50:00	20.96	11:50:00	22.59	19:50:00	20.2
	4:00:00	20.91	12:00:00	22.88	20:00:00	20.2
	4:10:00	20.84	12:10:00	23.09	20:10:00	20.2
	4:20:00	20.82	12:20:00	23.21	20:20:00	20.22
	4:30:00	20.74	12:30:00	23.48	20:30:00	20.28
	4:40:00	20.7	12:40:00	23.65	20:40:00	20.31
	4:50:00	20.64	12:50:00	23.89	20:50:00	20.4
	5:00:00	20.6	13:00:00	24.13	21:00:00	20.48
	5:10:00	20.5	13:10:00	24.39	21:10:00	20.57
	5:20:00	20.5	13:20:00	24.36	21:20:00	20.63
	5:30:00	20.44	13:30:00	24.72	21:30:00	20.73
	5:40:00	20.39	13:40:00	25.09	21:40:00	20.79
	5:50:00	20.34	13:50:00	25.49	21:50:00	20.83
	6:00:00	20.31	14:00:00	25.81	22:00:00	20.94
	6:10:00	20.21	14:10:00	25.94	22:10:00	21
	6:20:00	20.15	14:20:00	26.02	22:20:00	21.07
	6:30:00	20.14	14:30:00	26.08	22:30:00	21.1
	6:40:00	20.09	14:40:00	26.22	22:40:00	21.16
	6:50:00	20	14:50:00	25.55	22:50:00	21.22
	7:00:00	20.01	15:00:00	23.17	23:00:00	21.22
	7:10:00	19.97	15:10:00	21.61	23:10:00	21.21
	7:20:00	19.93	15:20:00	21.15	23:20:00	21.27
	7:30:00	19.88	15:30:00	20.8	23:30:00	21.27
	7:40:00	19.87	15:40:00	20.56	23:40:00	21.33
	7:50:00	19.87	15:50:00	20.45	23:50:00	21.29

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/21/2008	0:00:00	21.29	8:00:00	21.2		
	0:10:00	21.31	8:10:00	21.2	16:10:00	20.57
	0:20:00	21.33	8:20:00	21.24	16:20:00	20.74
	0:30:00	21.27	8:30:00	21.27	16:30:00	20.78
	0:40:00	21.29	8:40:00	21.29	16:40:00	20.94
	0:50:00	21.31	8:50:00	21.31	16:50:00	21.15
	1:00:00	21.31	9:10:00	21.57	17:00:00	21.31
	1:10:00	21.27	9:20:00	21.62	17:10:00	21.51
	1:20:00	21.29	9:30:00	21.64	17:20:00	21.51
	1:30:00	21.29	9:40:00	21.68	17:30:00	21.74
	1:40:00	21.31	9:50:00	21.7	17:40:00	22.06
	1:50:00	21.31	10:00:00	21.7	17:50:00	22.07
	2:00:00	21.29	10:10:00	21.68	18:00:00	22.39
	2:10:00	21.29	10:20:00	21.79	18:10:00	22.81
	2:20:00	21.31	10:30:00	21.86	18:20:00	23.43
	2:30:00	21.31	10:40:00	21.91	18:30:00	23.57
	2:40:00	21.27	10:50:00	21.96	18:40:00	24.02
	2:50:00	21.29	11:00:00	22.03	18:50:00	24.25
	3:00:00	21.29	11:10:00	22.14	19:00:00	24.39
	3:10:00	21.27	11:20:00	22.29	19:10:00	24.42
	3:20:00	21.27	11:30:00	22.42	19:20:00	24.5
	3:30:00	21.27	11:40:00	22.55	19:30:00	24.55
	3:40:00	21.24	11:50:00	22.69	19:40:00	24.54
	3:50:00	21.27	12:00:00	22.84	19:50:00	24.53
	4:00:00	21.29	12:10:00	22.97	20:00:00	24.45
	4:10:00	21.27	12:20:00	23	20:10:00	24.5
	4:20:00	21.31	12:30:00	23.19	20:20:00	24.42
	4:30:00	21.31	12:40:00	23.36	20:30:00	24.4
	4:40:00	21.29	12:50:00	23.37	20:40:00	24.35
	4:50:00	21.29	13:00:00	23.1	20:50:00	24.37
	5:00:00	21.24	13:10:00	23.01	21:00:00	24.29
	5:10:00	21.31	13:20:00	20.58	21:10:00	24.25
	5:20:00	21.27	13:30:00	19.94	21:20:00	24.2
	5:30:00	21.24	13:40:00	19.73	21:30:00	24.03
	5:40:00	21.22	13:50:00	19.78	21:40:00	23.99
	5:50:00	21.22	14:00:00	19.6	21:50:00	24
	6:00:00	21.22	14:10:00	19.59	22:00:00	23.99
	6:10:00	21.2	14:20:00	19.9	22:10:00	23.92
	6:20:00	21.2	14:30:00	19.67	22:20:00	23.86
	6:30:00	21.16	14:40:00	19.64	22:30:00	23.79
	6:40:00	21.13	14:50:00	19.72	22:40:00	23.73
	6:50:00	21.16	15:00:00	19.77	22:50:00	23.62
	7:00:00	21.16	15:10:00	19.85	23:00:00	23.65
	7:10:00	21.17	15:20:00	19.87	23:10:00	23.55
	7:20:00	21.19	15:30:00	19.96	23:20:00	23.47
	7:30:00	21.16	15:40:00	20.06	23:30:00	23.44
	7:40:00	21.18	15:50:00	20.33	23:40:00	23.43
	7:50:00	21.2	16:00:00	20.47	23:50:00	23.36



## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/22/2008	0:00:00	23.35	8:00:00	21.58	16:00:00	<b>25.88</b>
	0:10:00	23.25	8:10:00	21.53	16:10:00	<b>25.93</b>
	0:20:00	23.23	8:20:00	21.51	16:20:00	<b>25.95</b>
	0:30:00	23.17	8:30:00	21.51	16:30:00	<b>26.06</b>
	0:40:00	23.17	8:40:00	21.42	16:40:00	<b>26.08</b>
	0:50:00	23.09	8:50:00	21.46	16:50:00	<b>26.12</b>
	1:00:00	23.03	9:00:00	21.42	17:00:00	<b>25.97</b>
	1:10:00	23.02	9:10:00	21.42	17:10:00	<b>25.87</b>
	1:20:00	22.92	9:20:00	21.4	17:20:00	<b>25.79</b>
	1:30:00	22.92	9:30:00	21.48	17:30:00	<b>25.6</b>
	1:40:00	22.87	9:40:00	21.46	17:40:00	<b>25.49</b>
	1:50:00	22.82	9:50:00	21.53	17:50:00	<b>25.33</b>
	2:00:00	22.79	10:00:00	21.3	18:00:00	<b>25</b>
	2:10:00	22.73	10:10:00	21.67	18:10:00	24.15
	2:20:00	22.73	10:20:00	21.78	18:20:00	22.22
	2:30:00	22.66	10:30:00	21.7	18:30:00	21.16
	2:40:00	22.64	10:40:00	21.91	18:40:00	20.6
	2:50:00	22.55	10:50:00	22.1	18:50:00	20.47
	3:00:00	22.53	11:00:00	22.28	19:00:00	20.11
	3:10:00	22.55	11:10:00	22.64	19:10:00	19.86
	3:20:00	22.49	11:20:00	22.7	19:20:00	19.69
	3:30:00	22.38	11:30:00	22.8	19:30:00	19.48
	3:40:00	22.36	11:40:00	22.91	19:40:00	19.26
	3:50:00	22.31	11:50:00	23	19:50:00	19.03
	4:00:00	22.25	12:00:00	23.24	20:00:00	18.9
	4:10:00	22.19	12:10:00	23.32	20:10:00	18.79
	4:20:00	22.22	12:20:00	23.52	20:20:00	18.77
	4:30:00	22.14	12:30:00	23.62	20:30:00	19.05
	4:40:00	22.12	12:40:00	23.86	20:40:00	19.88
	4:50:00	22.07	12:50:00	23.78	20:50:00	20.57
	5:00:00	22.05	13:00:00	23.97	21:00:00	21.07
	5:10:00	22.03	13:10:00	24.1	21:10:00	21.51
	5:20:00	22.01	13:20:00	24.34	21:20:00	21.89
	5:30:00	22.01	13:30:00	24.56	21:30:00	22.19
	5:40:00	21.94	13:40:00	24.33	21:40:00	22.39
	5:50:00	21.92	13:50:00	24.55	21:50:00	22.6
	6:00:00	21.88	14:00:00	24.69	22:00:00	22.73
	6:10:00	21.9	14:10:00	24.98	22:10:00	22.84
	6:20:00	21.88	14:20:00	<b>25.17</b>	22:20:00	22.9
	6:30:00	21.85	14:30:00	<b>25.37</b>	22:30:00	22.99
	6:40:00	21.79	14:40:00	<b>25.39</b>	22:40:00	23.07
	6:50:00	21.79	14:50:00	<b>25.49</b>	22:50:00	23.17
	7:00:00	21.75	15:00:00	<b>25.56</b>	23:00:00	23.18
	7:10:00	21.7	15:10:00	<b>25.64</b>	23:10:00	23.23
	7:20:00	21.71	15:20:00	<b>25.82</b>	23:20:00	23.21
	7:30:00	21.69	15:30:00	<b>25.86</b>	23:30:00	23.25
	7:40:00	21.65	15:40:00	<b>25.86</b>	23:40:00	23.3
	7:50:00	21.58	15:50:00	<b>25.73</b>	23:50:00	23.34

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/23/2008	0:00:00	23.3	8:00:00	21.09	16:00:00	19.43
	0:10:00	23.35	8:10:00	21.09	16:10:00	19.19
	0:20:00	23.33	8:20:00	21	16:20:00	19.1
	0:30:00	23.33	8:30:00	20.96	16:30:00	19.13
	0:40:00	23.27	8:40:00	20.92	16:40:00	19.17
	0:50:00	23.29	8:50:00	20.89	16:50:00	19.1
	1:00:00	23.13	9:00:00	20.81	17:00:00	18.99
	1:10:00	23.12	9:10:00	20.73	17:10:00	18.89
	1:20:00	23.14	9:20:00	20.68	17:20:00	18.84
	1:30:00	23.08	9:30:00	20.64	17:30:00	18.85
	1:40:00	23.09	9:40:00	20.57	17:40:00	18.8
	1:50:00	23.01	9:50:00	20.51	17:50:00	18.46
	2:00:00	22.99	10:00:00	20.49	18:00:00	18.9
	2:10:00	22.97	10:10:00	20.41	18:10:00	18.72
	2:20:00	22.93	10:20:00	20.41	18:20:00	18.56
	2:30:00	22.9	10:30:00	20.37	18:30:00	19.06
	2:40:00	22.84	10:40:00	20.35	18:40:00	19.52
	2:50:00	22.79	10:50:00	20.33	18:50:00	19.81
	3:00:00	22.73	11:00:00	20.33	19:00:00	20.08
	3:10:00	22.69	11:10:00	20.33	19:10:00	20.28
	3:20:00	22.66	11:20:00	20.34	19:20:00	20.37
	3:30:00	22.6	11:30:00	20.36	19:30:00	20.5
	3:40:00	22.55	11:40:00	20.31	19:40:00	20.61
	3:50:00	22.51	11:50:00	20.33	19:50:00	20.65
	4:00:00	22.42	12:00:00	20.35	20:00:00	20.65
	4:10:00	22.38	12:10:00	20.35	20:10:00	20.65
	4:20:00	22.34	12:20:00	20.37	20:20:00	20.65
	4:30:00	22.27	12:30:00	20.41	20:30:00	20.63
	4:40:00	22.23	12:40:00	20.38	20:40:00	20.65
	4:50:00	22.16	12:50:00	20.43	20:50:00	20.65
	5:00:00	22.1	13:00:00	21.16	21:00:00	20.64
	5:10:00	22.03	13:10:00	20.98	21:10:00	20.61
	5:20:00	21.99	13:20:00	20.98	21:20:00	20.64
	5:30:00	21.93	13:30:00	21.09	21:30:00	20.64
	5:40:00	21.89	13:40:00	20.71	21:40:00	20.62
	5:50:00	21.8	13:50:00	20.83	21:50:00	20.64
	6:00:00	21.74	14:00:00	21.77	22:00:00	20.59
	6:10:00	21.69	14:10:00	21	22:10:00	20.61
	6:20:00	21.61	14:20:00	21.7	22:20:00	20.55
	6:30:00	21.57	14:30:00	21.55	22:30:00	20.57
	6:40:00	21.52	14:40:00	21.63	22:40:00	20.58
	6:50:00	21.46	14:50:00	19.85	22:50:00	20.57
	7:00:00	21.42	15:00:00	19.34	23:00:00	20.5
	7:10:00	21.38	15:10:00	19.33	23:10:00	20.52
	7:20:00	21.3	15:20:00	19.82	23:20:00	20.5
	7:30:00	21.18	15:30:00	19.32	23:30:00	20.46
	7:40:00	21.22	15:40:00	19.45	23:40:00	20.44
	7:50:00	21.16	15:50:00	19.5	23:50:00	20.41

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/24/2008	0:00:00	20.44	8:00:00	19.13	16:00:00	18.29
	0:10:00	20.39	8:10:00	19.14	16:10:00	18.51
	0:20:00	20.35	8:20:00	19.1	16:20:00	19.02
	0:30:00	20.35	8:30:00	19.13	16:30:00	18.95
	0:40:00	20.31	8:40:00	19.08	16:40:00	18.95
	0:50:00	20.26	8:50:00	19.13	16:50:00	18.99
	1:00:00	20.22	9:00:00	19.1	17:00:00	18.98
	1:10:00	20.21	9:10:00	19.14	17:10:00	18.85
	1:20:00	20.15	9:20:00	19.12	17:20:00	18.77
	1:30:00	20.14	9:30:00	19.15	17:30:00	18.61
	1:40:00	20.14	9:40:00	19.15	17:40:00	18.63
	1:50:00	20.1	9:50:00	19.19	17:50:00	18.66
	2:00:00	20.02	10:00:00	19.26	18:00:00	18.68
	2:10:00	19.98	10:10:00	19.3	18:10:00	18.6
	2:20:00	19.89	10:20:00	19.32	18:20:00	18.46
	2:30:00	19.93	10:30:00	19.39	18:30:00	18.14
	2:40:00	19.91	10:40:00	19.43	18:40:00	18.26
	2:50:00	19.82	10:50:00	19.41	18:50:00	18.11
	3:00:00	19.82	11:00:00	19.48	19:00:00	17.98
	3:10:00	19.76	11:10:00	19.61	19:10:00	17.87
	3:20:00	19.76	11:20:00	19.58	19:20:00	17.81
	3:30:00	19.72	11:30:00	19.62	19:30:00	17.76
	3:40:00	19.65	11:40:00	19.64	19:40:00	17.83
	3:50:00	19.66	11:50:00	20.28	19:50:00	17.87
	4:00:00	19.63	12:00:00	19.85	20:00:00	17.78
	4:10:00	19.56	12:10:00	19.85	20:10:00	17.72
	4:20:00	19.56	12:20:00	20.52	20:20:00	17.55
	4:30:00	19.55	12:30:00	19.98	20:30:00	17.4
	4:40:00	19.53	12:40:00	20.65	20:40:00	17.26
	4:50:00	19.48	12:50:00	20.11	20:50:00	17.22
	5:00:00	19.42	13:00:00	20.81	21:00:00	17.28
	5:10:00	19.45	13:10:00	20.24	21:10:00	17.27
	5:20:00	19.39	13:20:00	20.27	21:20:00	17.16
	5:30:00	19.39	13:30:00	20.32	21:30:00	17.2
	5:40:00	19.37	13:40:00	20.31	21:40:00	17.16
	5:50:00	19.34	13:50:00	20.55	21:50:00	17.12
	6:00:00	19.31	14:00:00	20.52	22:00:00	17.05
	6:10:00	19.29	14:10:00	21.23	22:10:00	17.02
	6:20:00	19.27	14:20:00	21.23	22:20:00	16.99
	6:30:00	19.21	14:30:00	20.68	22:30:00	17.05
	6:40:00	19.21	14:40:00	20.74	22:40:00	17.32
	6:50:00	19.21	14:50:00	20.74	22:50:00	17.62
	7:00:00	19.15	15:00:00	21.22	23:00:00	17.9
	7:10:00	19.19	15:10:00	20.09	23:10:00	18.1
	7:20:00	19.18	15:20:00	19.52	23:20:00	18.31
	7:30:00	19.08	15:30:00	19.35	23:30:00	18.44
	7:40:00	19.09	15:40:00	18.65	23:40:00	18.58
	7:50:00	19.14	15:50:00	19.17	23:50:00	18.73

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/25/2008	0:00:00	18.84	8:00:00	18.03	16:00:00	19.72
	0:10:00	18.99	8:10:00	18.05	16:10:00	19.77
	0:20:00	19.02	8:20:00	18.01	16:20:00	19.79
	0:30:00	19.1	8:30:00	18.03	16:30:00	19.81
	0:40:00	19.17	8:40:00	18.03	16:40:00	19.92
	0:50:00	19.15	8:50:00	18.01	16:50:00	19.92
	1:00:00	19.26	9:00:00	18.08	17:00:00	19.79
	1:10:00	19.21	9:10:00	18.08	17:10:00	19.43
	1:20:00	19.19	9:20:00	18.14	17:20:00	19.33
	1:30:00	19.27	9:30:00	18.12	17:30:00	19.21
	1:40:00	19.27	9:40:00	18.21	17:40:00	19.36
	1:50:00	19.24	9:50:00	18.23	17:50:00	19.32
	2:00:00	19.24	10:00:00	18.31	18:00:00	19.24
	2:10:00	19.21	10:10:00	18.35	18:10:00	19.15
	2:20:00	19.21	10:20:00	18.41	18:20:00	19
	2:30:00	19.19	10:30:00	18.53	18:30:00	18.88
	2:40:00	19.14	10:40:00	18.58	18:40:00	18.77
	2:50:00	19.17	10:50:00	18.72	18:50:00	18.63
	3:00:00	18.99	11:00:00	18.8	19:00:00	18.5
	3:10:00	19.08	11:10:00	18.91	19:10:00	18.37
	3:20:00	19.04	11:20:00	19.06	19:20:00	18.24
	3:30:00	19.04	11:30:00	19.15	19:30:00	18.13
	3:40:00	18.99	11:40:00	19.33	19:40:00	18
	3:50:00	18.97	11:50:00	19.49	19:50:00	17.89
	4:00:00	18.93	12:00:00	19.65	20:00:00	17.83
	4:10:00	18.92	12:10:00	19.72	20:10:00	17.72
	4:20:00	18.9	12:20:00	19.95	20:20:00	17.66
	4:30:00	18.83	12:30:00	20.04	20:30:00	17.6
	4:40:00	18.84	12:40:00	20.11	20:40:00	17.51
	4:50:00	18.75	12:50:00	20.04	20:50:00	17.53
	5:00:00	18.71	13:00:00	19.71	21:00:00	17.55
	5:10:00	18.62	13:10:00	18.84	21:10:00	17.49
	5:20:00	18.7	13:20:00	18.22	21:20:00	17.51
	5:30:00	18.68	13:30:00	18.47	21:30:00	17.49
	5:40:00	18.61	13:40:00	18.57	21:40:00	17.51
	5:50:00	18.51	13:50:00	18.67	21:50:00	17.47
	6:00:00	18.45	14:00:00	19.26	22:00:00	17.51
	6:10:00	18.45	14:10:00	19.27	22:10:00	17.55
	6:20:00	18.42	14:20:00	19.27	22:20:00	17.68
	6:30:00	18.35	14:30:00	19.5	22:30:00	17.99
6:40:00	18.33	14:40:00	19.24	22:40:00	18.27	
6:50:00	18.31	14:50:00	19.54	22:50:00	18.48	
7:00:00	18.24	15:00:00	19.14	23:00:00	18.65	
7:10:00	18.21	15:10:00	19.6	23:10:00	18.85	
7:20:00	18.17	15:20:00	19.78	23:20:00	19.01	
7:30:00	18.15	15:30:00	19.67	23:30:00	19.18	
7:40:00	18.12	15:40:00	19.67	23:40:00	19.22	
7:50:00	18.09	15:50:00	19.74	23:50:00	19.38	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/26/2008	0:00:00	19.42	8:00:00	19.43	16:00:00	19.57
	0:10:00	19.5	8:10:00	19.43	16:10:00	19.54
	0:20:00	19.58	8:20:00	19.45	16:20:00	19.59
	0:30:00	19.61	8:30:00	19.45	16:30:00	19.59
	0:40:00	19.66	8:40:00	19.48	16:40:00	19.51
	0:50:00	19.74	8:50:00	19.52	16:50:00	19.51
	1:00:00	19.74	9:00:00	19.54	17:00:00	19.42
	1:10:00	19.76	9:10:00	19.62	17:10:00	19.4
	1:20:00	19.8	9:20:00	19.64	17:20:00	19.28
	1:30:00	19.85	9:30:00	19.63	17:30:00	19.25
	1:40:00	19.85	9:40:00	19.69	17:40:00	19.25
	1:50:00	19.84	9:50:00	19.69	17:50:00	19.25
	2:00:00	19.85	10:00:00	19.86	18:00:00	19.25
	2:10:00	19.89	10:10:00	19.86	18:10:00	19.36
	2:20:00	19.87	10:20:00	19.99	18:20:00	19.38
	2:30:00	19.88	10:30:00	20.12	18:30:00	19.44
	2:40:00	19.89	10:40:00	20.19	18:40:00	19.46
	2:50:00	19.85	10:50:00	20.15	18:50:00	19.52
	3:00:00	19.85	11:00:00	20.35	19:00:00	19.51
	3:10:00	19.82	11:10:00	20.45	19:10:00	19.51
	3:20:00	19.8	11:20:00	20.58	19:20:00	19.5
	3:30:00	19.82	11:30:00	20.48	19:30:00	19.48
	3:40:00	19.81	11:40:00	20.74	19:40:00	19.52
	3:50:00	19.76	11:50:00	20.68	19:50:00	19.68
	4:00:00	19.76	12:00:00	21.06	20:00:00	19.91
	4:10:00	19.72	12:10:00	19.4	20:10:00	20.17
	4:20:00	19.73	12:20:00	18.55	20:20:00	20.36
	4:30:00	19.69	12:30:00	18.74	20:30:00	20.52
	4:40:00	19.65	12:40:00	19.18	20:40:00	20.67
	4:50:00	19.68	12:50:00	18.89	20:50:00	20.76
	5:00:00	19.63	13:00:00	18.93	21:00:00	20.87
	5:10:00	19.63	13:10:00	18.95	21:10:00	20.95
	5:20:00	19.64	13:20:00	18.97	21:20:00	21
	5:30:00	19.58	13:30:00	19.07	21:30:00	21.05
	5:40:00	19.54	13:40:00	19.15	21:40:00	21.05
	5:50:00	19.55	13:50:00	19.05	21:50:00	21.13
	6:00:00	19.55	14:00:00	19.25	22:00:00	21.12
	6:10:00	19.52	14:10:00	18.95	22:10:00	21.16
	6:20:00	19.45	14:20:00	18.96	22:20:00	21.15
	6:30:00	19.39	14:30:00	19.02	22:30:00	21.17
	6:40:00	19.45	14:40:00	19.31	22:40:00	21.12
	6:50:00	19.43	14:50:00	19.23	22:50:00	21.12
	7:00:00	19.41	15:00:00	19.15	23:00:00	21.06
	7:10:00	19.44	15:10:00	19.49	23:10:00	21.1
	7:20:00	19.43	15:20:00	19.32	23:20:00	21.03
	7:30:00	19.39	15:30:00	19.62	23:30:00	21.03
	7:40:00	19.42	15:40:00	19.48	23:40:00	21.05
	7:50:00	19.39	15:50:00	19.51	23:50:00	21.03



## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/27/2008	0:00:00	21.02	8:00:00	20.49	16:00:00	25.33
	0:10:00	20.99	8:10:00	20.53	16:10:00	25.32
	0:20:00	20.96	8:20:00	20.52	16:20:00	25.33
	0:30:00	20.98	8:30:00	20.52	16:30:00	25.42
	0:40:00	20.94	8:40:00	20.57	16:40:00	25.46
	0:50:00	20.95	8:50:00	20.61	16:50:00	25.42
	1:00:00	20.95	9:00:00	20.61	17:00:00	25.47
	1:10:00	20.93	9:10:00	20.61	17:10:00	25.38
	1:20:00	20.91	9:20:00	20.74	17:20:00	25.41
	1:30:00	20.85	9:30:00	20.83	17:30:00	25.34
	1:40:00	20.83	9:40:00	20.79	17:40:00	25.34
	1:50:00	20.84	9:50:00	20.87	17:50:00	25.27
	2:00:00	20.81	10:00:00	20.94	18:00:00	25.21
	2:10:00	20.85	10:10:00	20.84	18:10:00	25.13
	2:20:00	20.83	10:20:00	21.08	18:20:00	25.02
	2:30:00	20.82	10:30:00	21.23	18:30:00	24.9
	2:40:00	20.82	10:40:00	21.28	18:40:00	24.74
	2:50:00	20.76	10:50:00	21.36	18:50:00	24.68
	3:00:00	20.79	11:00:00	21.45	19:00:00	24.6
	3:10:00	20.8	11:10:00	21.65	19:10:00	24.45
	3:20:00	20.74	11:20:00	22.01	19:20:00	24.3
	3:30:00	20.8	11:30:00	21.96	19:30:00	24.13
	3:40:00	20.7	11:40:00	22.03	19:40:00	23.95
	3:50:00	20.7	11:50:00	22.6	19:50:00	23.8
	4:00:00	20.7	12:00:00	22.2	20:00:00	23.65
	4:10:00	20.7	12:10:00	22.15	20:10:00	23.52
	4:20:00	20.7	12:20:00	22.41	20:20:00	23.36
	4:30:00	20.68	12:30:00	22.72	20:30:00	23.23
	4:40:00	20.68	12:40:00	22.77	20:40:00	23.12
	4:50:00	20.65	12:50:00	22.73	20:50:00	22.95
	5:00:00	20.61	13:00:00	22.72	21:00:00	22.79
	5:10:00	20.61	13:10:00	23.05	21:10:00	22.69
	5:20:00	20.6	13:20:00	23.2	21:20:00	22.53
	5:30:00	20.57	13:30:00	23.4	21:30:00	22.42
	5:40:00	20.56	13:40:00	23.51	21:40:00	22.29
	5:50:00	20.52	13:50:00	23.61	21:50:00	22.14
	6:00:00	20.52	14:00:00	23.7	22:00:00	22.07
	6:10:00	20.55	14:10:00	23.85	22:10:00	21.99
	6:20:00	20.52	14:20:00	24	22:20:00	21.89
	6:30:00	20.52	14:30:00	23.99	22:30:00	21.79
	6:40:00	20.51	14:40:00	24.37	22:40:00	21.68
	6:50:00	20.52	14:50:00	24.58	22:50:00	21.57
	7:00:00	20.49	15:00:00	24.7	23:00:00	21.5
	7:10:00	20.47	15:10:00	24.91	23:10:00	21.41
	7:20:00	20.48	15:20:00	24.91	23:20:00	21.35
	7:30:00	20.51	15:30:00	25.15	23:30:00	21.2
	7:40:00	20.46	15:40:00	24.97	23:40:00	21.18
	7:50:00	20.47	15:50:00	25.03	23:50:00	21.1

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/28/2008	0:00:00	21	8:00:00	19.13	16:00:00	18.61
	0:10:00	20.92	8:10:00	19.13	16:10:00	18.63
	0:20:00	20.89	8:20:00	19.14	16:20:00	18.7
	0:30:00	20.85	8:30:00	19.05	16:30:00	18.71
	0:40:00	20.74	8:40:00	19.18	16:40:00	18.74
	0:50:00	20.68	8:50:00	19.17	16:50:00	18.8
	1:00:00	20.65	9:00:00	19.22	17:00:00	18.84
	1:10:00	20.59	9:10:00	19.26	17:10:00	18.88
	1:20:00	20.53	9:20:00	19.4	17:20:00	18.92
	1:30:00	20.46	9:30:00	19.46	17:30:00	18.93
	1:40:00	20.46	9:40:00	19.5	17:40:00	19.02
	1:50:00	20.39	9:50:00	19.6	17:50:00	19.08
	2:00:00	20.37	10:00:00	19.68	18:00:00	19.13
	2:10:00	20.28	10:10:00	19.77	18:10:00	19.17
	2:20:00	20.28	10:20:00	19.85	18:20:00	19.32
	2:30:00	20.21	10:30:00	19.98	18:30:00	19.5
	2:40:00	20.15	10:40:00	20.06	18:40:00	19.74
	2:50:00	20.13	10:50:00	20.21	18:50:00	19.87
	3:00:00	20.06	11:00:00	20.29	19:00:00	20.06
	3:10:00	20.11	11:10:00	20.46	19:10:00	20.22
	3:20:00	20	11:20:00	20.63	19:20:00	20.31
	3:30:00	20	11:30:00	20.64	19:30:00	20.46
	3:40:00	19.95	11:40:00	20.76	19:40:00	20.55
	3:50:00	19.93	11:50:00	20.89	19:50:00	20.68
	4:00:00	19.86	12:00:00	21.01	20:00:00	20.79
	4:10:00	19.82	12:10:00	21.37	20:10:00	20.85
	4:20:00	19.76	12:20:00	21.61	20:20:00	20.89
	4:30:00	19.75	12:30:00	21.88	20:30:00	20.92
	4:40:00	19.71	12:40:00	21.88	20:40:00	21
	4:50:00	19.71	12:50:00	22.04	20:50:00	21.05
	5:00:00	19.64	13:00:00	22.06	21:00:00	21.03
	5:10:00	19.62	13:10:00	21.46	21:10:00	21.09
	5:20:00	19.58	13:20:00	19.96	21:20:00	21.11
	5:30:00	19.51	13:30:00	19.3	21:30:00	21.09
	5:40:00	19.39	13:40:00	19.44	21:40:00	21.13
	5:50:00	19.53	13:50:00	19.3	21:50:00	21.09
	6:00:00	19.42	14:00:00	19.33	22:00:00	21.1
	6:10:00	19.4	14:10:00	19.33	22:10:00	21.12
	6:20:00	19.4	14:20:00	19.29	22:20:00	21.1
	6:30:00	19.32	14:30:00	19.21	22:30:00	21.1
	6:40:00	19.31	14:40:00	19.13	22:40:00	21.07
	6:50:00	19.31	14:50:00	19.04	22:50:00	21
	7:00:00	19.21	15:00:00	18.94	23:00:00	21.09
	7:10:00	19.19	15:10:00	18.85	23:10:00	21
	7:20:00	19.19	15:20:00	18.77	23:20:00	21
	7:30:00	19.17	15:30:00	18.7	23:30:00	20.94
	7:40:00	19.18	15:40:00	18.68	23:40:00	20.95
	7:50:00	19.15	15:50:00	18.63	23:50:00	20.94

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/29/2008	0:00:00	20.89	8:00:00	19.58	16:00:00	26.06
	0:10:00	20.87	8:10:00	19.61	16:10:00	26.19
	0:20:00	20.84	8:20:00	19.65	16:20:00	26.28
	0:30:00	20.83	8:30:00	19.63	16:30:00	26.3
	0:40:00	20.8	8:40:00	19.67	16:40:00	26.21
	0:50:00	20.8	8:50:00	19.67	16:50:00	26.39
	1:00:00	20.72	9:00:00	19.72	17:00:00	26.26
	1:10:00	20.73	9:10:00	19.69	17:10:00	26.39
	1:20:00	20.71	9:20:00	19.77	17:20:00	26.43
	1:30:00	20.71	9:30:00	19.91	17:30:00	26.4
	1:40:00	20.7	9:40:00	20.02	17:40:00	26.46
	1:50:00	20.61	9:50:00	20.08	17:50:00	26.21
	2:00:00	20.62	10:00:00	20.25	18:00:00	25.73
	2:10:00	20.62	10:10:00	20.32	18:10:00	25.03
	2:20:00	20.57	10:20:00	20.39	18:20:00	24.12
	2:30:00	20.55	10:30:00	20.52	18:30:00	21.64
	2:40:00	20.55	10:40:00	20.67	18:40:00	20.44
	2:50:00	20.48	10:50:00	20.76	18:50:00	20.05
	3:00:00	20.47	11:00:00	20.89	19:00:00	19.72
	3:10:00	20.44	11:10:00	21.05	19:10:00	19.39
	3:20:00	20.43	11:20:00	21.27	19:20:00	19.21
	3:30:00	20.4	11:30:00	21.21	19:30:00	19.02
	3:40:00	20.36	11:40:00	21.29	19:40:00	18.95
	3:50:00	20.31	11:50:00	21.5	19:50:00	18.93
	4:00:00	20.33	12:00:00	21.81	20:00:00	18.82
	4:10:00	20.29	12:10:00	21.91	20:10:00	18.8
	4:20:00	20.26	12:20:00	22.17	20:20:00	18.78
	4:30:00	20.23	12:30:00	22.44	20:30:00	18.75
	4:40:00	20.19	12:40:00	22.89	20:40:00	18.72
	4:50:00	20.16	12:50:00	22.72	20:50:00	18.73
5:00:00	20.14	13:00:00	23.02	21:00:00	18.75	
5:10:00	20.12	13:10:00	23.51	21:10:00	18.73	
5:20:00	20.1	13:20:00	23.63	21:20:00	18.79	
5:30:00	20	13:30:00	23.91	21:30:00	18.8	
5:40:00	19.98	13:40:00	24.1	21:40:00	18.73	
5:50:00	19.96	13:50:00	24.28	21:50:00	18.81	
6:00:00	19.93	14:00:00	24.42	22:00:00	18.77	
6:10:00	19.92	14:10:00	24.58	22:10:00	18.7	
6:20:00	19.88	14:20:00	24.77	22:20:00	18.69	
6:30:00	19.81	14:30:00	25.02	22:30:00	18.7	
6:40:00	19.82	14:40:00	25.24	22:40:00	18.71	
6:50:00	19.75	14:50:00	25.42	22:50:00	18.82	
7:00:00	19.72	15:00:00	25.41	23:00:00	19.01	
7:10:00	19.69	15:10:00	25.56	23:10:00	19.17	
7:20:00	19.69	15:20:00	25.71	23:20:00	19.38	
7:30:00	19.68	15:30:00	25.78	23:30:00	19.56	
7:40:00	19.62	15:40:00	25.86	23:40:00	19.72	
7:50:00	19.62	15:50:00	25.93	23:50:00	19.86	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/30/2008	0:00:00	20.01	8:00:00	20	16:00:00	19.44
	0:10:00	20.16	8:10:00	20	16:10:00	19.01
	0:20:00	20.27	8:20:00	20	16:20:00	18.83
	0:30:00	20.36	8:30:00	20.03	16:30:00	18.74
	0:40:00	20.38	8:40:00	20.02	16:40:00	18.61
	0:50:00	20.53	8:50:00	20.04	16:50:00	18.58
	1:00:00	20.51	9:00:00	20.09	17:00:00	18.49
	1:10:00	20.64	9:10:00	20.15	17:10:00	18.35
	1:20:00	20.61	9:20:00	20.28	17:20:00	18.31
	1:30:00	20.71	9:30:00	20.35	17:30:00	18.42
	1:40:00	20.68	9:40:00	20.16	17:40:00	18.44
	1:50:00	20.73	9:50:00	20.46	17:50:00	18.37
	2:00:00	20.72	10:00:00	20.59	18:00:00	18.3
	2:10:00	20.61	10:10:00	20.62	18:10:00	18.19
	2:20:00	20.72	10:20:00	20.71	18:20:00	18.02
	2:30:00	20.75	10:30:00	20.93	18:30:00	17.9
	2:40:00	20.7	10:40:00	21.05	18:40:00	17.97
	2:50:00	20.72	10:50:00	21.15	18:50:00	18.03
	3:00:00	20.72	11:00:00	21.25	19:00:00	17.99
	3:10:00	20.68	11:10:00	21.67	19:10:00	17.76
	3:20:00	20.72	11:20:00	21.79	19:20:00	17.58
	3:30:00	20.67	11:30:00	21.69	19:30:00	17.44
	3:40:00	20.62	11:40:00	21.9	19:40:00	17.42
	3:50:00	20.61	11:50:00	22.24	19:50:00	17.42
	4:00:00	20.67	12:00:00	22.05	20:00:00	17.44
	4:10:00	20.56	12:10:00	22.35	20:10:00	17.44
	4:20:00	20.51	12:20:00	22.69	20:20:00	17.49
	4:30:00	20.52	12:30:00	22.81	20:30:00	17.51
	4:40:00	20.45	12:40:00	22.92	20:40:00	17.59
	4:50:00	20.48	12:50:00	23.16	20:50:00	17.58
	5:00:00	20.43	13:00:00	23.15	21:00:00	17.63
	5:10:00	20.39	13:10:00	23.32	21:10:00	17.64
	5:20:00	20.39	13:20:00	23.36	21:20:00	17.6
	5:30:00	20.36	13:30:00	23.45	21:30:00	17.72
	5:40:00	20.35	13:40:00	23.48	21:40:00	17.78
	5:50:00	20.26	13:50:00	23.51	21:50:00	17.75
	6:00:00	20.29	14:00:00	23.44	22:00:00	17.81
	6:10:00	20.27	14:10:00	23.44	22:10:00	17.86
	6:20:00	20.24	14:20:00	23.35	22:20:00	17.89
	6:30:00	20.15	14:30:00	23.35	22:30:00	18.07
	6:40:00	20.17	14:40:00	23.29	22:40:00	18.33
	6:50:00	20.13	14:50:00	23.14	22:50:00	18.61
	7:00:00	20.11	15:00:00	23.22	23:00:00	18.92
	7:10:00	20.09	15:10:00	23.42	23:10:00	19.15
	7:20:00	20.09	15:20:00	23.29	23:20:00	19.43
	7:30:00	20.06	15:30:00	22.96	23:30:00	19.67
	7:40:00	20.02	15:40:00	21.78	23:40:00	19.9
	7:50:00	20.04	15:50:00	20.09	23:50:00	20.09

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
7/31/2008	0:00:00	20.32	8:00:00	21.46	16:00:00	22.45
	0:10:00	20.41	8:10:00	21.46	16:10:00	22.45
	0:20:00	20.55	8:20:00	21.48	16:20:00	22.34
	0:30:00	20.69	8:30:00	21.54	16:30:00	21.18
	0:40:00	20.76	8:40:00	21.48	16:40:00	20.1
	0:50:00	20.85	8:50:00	21.54	16:50:00	19.61
	1:00:00	20.89	9:00:00	21.57	17:00:00	19.43
	1:10:00	21	9:10:00	21.59	17:10:00	19.3
	1:20:00	21.05	9:20:00	21.62	17:20:00	19.26
	1:30:00	21.15	9:30:00	21.66	17:30:00	19.18
	1:40:00	21.16	9:40:00	21.68	17:40:00	19.02
	1:50:00	21.24	9:50:00	21.72	17:50:00	18.8
	2:00:00	21.29	10:00:00	21.78	18:00:00	18.68
	2:10:00	21.32	10:10:00	21.81	18:10:00	18.42
	2:20:00	21.34	10:20:00	21.77	18:20:00	18.17
	2:30:00	21.35	10:30:00	21.82	18:30:00	18
	2:40:00	21.39	10:40:00	21.88	18:40:00	17.99
	2:50:00	21.41	10:50:00	21.92	18:50:00	17.99
	3:00:00	21.45	11:00:00	21.94	19:00:00	18.01
	3:10:00	21.44	11:10:00	21.98	19:10:00	17.85
	3:20:00	21.44	11:20:00	22.02	19:20:00	17.76
	3:30:00	21.46	11:30:00	22.06	19:30:00	17.66
	3:40:00	21.5	11:40:00	22.09	19:40:00	17.63
	3:50:00	21.54	11:50:00	22.06	19:50:00	17.55
	4:00:00	21.51	12:00:00	22.03	20:00:00	17.53
	4:10:00	21.51	12:10:00	22.1	20:10:00	17.58
	4:20:00	21.55	12:20:00	22.1	20:20:00	17.64
	4:30:00	21.53	12:30:00	22.14	20:30:00	17.77
	4:40:00	21.55	12:40:00	22	20:40:00	17.79
	4:50:00	21.56	12:50:00	22.22	20:50:00	17.86
	5:00:00	21.55	13:00:00	22.22	21:00:00	17.92
	5:10:00	21.56	13:10:00	22.22	21:10:00	18.06
	5:20:00	21.54	13:20:00	22.19	21:20:00	18.06
	5:30:00	21.53	13:30:00	22.15	21:30:00	18.1
	5:40:00	21.53	13:40:00	22.05	21:40:00	18.19
	5:50:00	21.54	13:50:00	22.73	21:50:00	18.44
	6:00:00	21.52	14:00:00	22.27	22:00:00	18.68
	6:10:00	21.51	14:10:00	23.03	22:10:00	18.96
	6:20:00	21.51	14:20:00	22.42	22:20:00	19.29
	6:30:00	21.51	14:30:00	22.45	22:30:00	19.39
	6:40:00	21.48	14:40:00	22.59	22:40:00	19.63
	6:50:00	21.46	14:50:00	22.6	22:50:00	19.79
	7:00:00	21.44	15:00:00	22.64	23:00:00	19.91
	7:10:00	21.43	15:10:00	22.6	23:10:00	20.03
	7:20:00	21.44	15:20:00	22.59	23:20:00	20.15
	7:30:00	21.45	15:30:00	22.53	23:30:00	20.19
	7:40:00	21.44	15:40:00	22.52	23:40:00	20.26
	7:50:00	21.46	15:50:00	22.53	23:50:00	20.35

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/1/2008	0:00:00	20.35	8:00:00	20.02	16:00:00	19.71
	0:10:00	20.41	8:10:00	20	16:10:00	19.82
	0:20:00	20.41	8:20:00	20.05	16:20:00	19.92
	0:30:00	20.47	8:30:00	20.03	16:30:00	19.95
	0:40:00	20.48	8:40:00	19.98	16:40:00	20.1
	0:50:00	20.51	8:50:00	20.04	16:50:00	20.19
	1:00:00	20.51	9:00:00	20.08	17:00:00	20.37
	1:10:00	20.47	9:10:00	20.14	17:10:00	20.48
	1:20:00	20.49	9:20:00	20.22	17:20:00	20.62
	1:30:00	20.49	9:30:00	20.26	17:30:00	20.92
	1:40:00	20.5	9:40:00	20.26	17:40:00	21.04
	1:50:00	20.45	9:50:00	20.39	17:50:00	21.21
	2:00:00	20.46	10:00:00	20.39	18:00:00	21.36
	2:10:00	20.44	10:10:00	20.48	18:10:00	21.43
	2:20:00	20.44	10:20:00	20.57	18:20:00	21.57
	2:30:00	20.4	10:30:00	20.7	18:30:00	21.52
	2:40:00	20.4	10:40:00	20.79	18:40:00	21.61
	2:50:00	20.41	10:50:00	20.87	18:50:00	21.72
	3:00:00	20.35	11:00:00	21.07	19:00:00	21.81
	3:10:00	20.4	11:10:00	21.2	19:10:00	21.94
	3:20:00	20.34	11:20:00	21.57	19:20:00	22.06
	3:30:00	20.34	11:30:00	21.5	19:30:00	22.17
	3:40:00	20.36	11:40:00	21.66	19:40:00	22.27
	3:50:00	20.29	11:50:00	21.66	19:50:00	22.35
	4:00:00	20.28	12:00:00	21.76	20:00:00	22.4
	4:10:00	20.31	12:10:00	22.07	20:10:00	22.46
	4:20:00	20.31	12:20:00	21.96	20:20:00	22.5
	4:30:00	20.26	12:30:00	22.05	20:30:00	22.51
	4:40:00	20.24	12:40:00	22.34	20:40:00	22.51
	4:50:00	20.25	12:50:00	22.16	20:50:00	22.53
	5:00:00	20.27	13:00:00	22.11	21:00:00	22.55
	5:10:00	20.25	13:10:00	22.43	21:10:00	22.55
	5:20:00	20.26	13:20:00	21.81	21:20:00	22.55
	5:30:00	20.22	13:30:00	20.09	21:30:00	22.51
	5:40:00	20.22	13:40:00	19.56	21:40:00	22.52
	5:50:00	20.22	13:50:00	19.48	21:50:00	22.42
	6:00:00	20.15	14:00:00	19.32	22:00:00	22.4
	6:10:00	20.2	14:10:00	19.27	22:10:00	22.36
	6:20:00	20.13	14:20:00	19.2	22:20:00	22.34
	6:30:00	20.09	14:30:00	19.31	22:30:00	22.3
	6:40:00	20.09	14:40:00	19.38	22:40:00	22.26
	6:50:00	20.1	14:50:00	19.49	22:50:00	22.28
	7:00:00	20.09	15:00:00	19.55	23:00:00	22.2
	7:10:00	20.03	15:10:00	19.64	23:10:00	22.18
	7:20:00	20.04	15:20:00	19.64	23:20:00	22.14
	7:30:00	20.03	15:30:00	19.68	23:30:00	22.14
	7:40:00	20	15:40:00	19.75	23:40:00	22.07
	7:50:00	20.05	15:50:00	19.71	23:50:00	22.05



## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/2/2008	0:00:00	22.01	8:00:00	19.48	16:00:00	21.04
	0:10:00	22.01	8:10:00	19.55	16:10:00	21.34
	0:20:00	22.01	8:20:00	19.57	16:20:00	21.5
	0:30:00	21.95	8:30:00	19.64	16:30:00	21.58
	0:40:00	21.92	8:40:00	19.61	16:40:00	21.35
	0:50:00	21.91	8:50:00	19.67	16:50:00	20.72
	1:00:00	21.81	9:00:00	19.74	17:00:00	20.28
	1:10:00	21.77	9:10:00	19.76	17:10:00	19.91
	1:20:00	21.77	9:20:00	19.73	17:20:00	19.67
	1:30:00	21.72	9:30:00	19.84	17:30:00	19.48
	1:40:00	21.72	9:40:00	19.74	17:40:00	19.37
	1:50:00	21.66	9:50:00	20	17:50:00	19.21
	2:00:00	21.59	10:00:00	20.02	18:00:00	19.16
	2:10:00	21.55	10:10:00	20.01	18:10:00	19.03
	2:20:00	21.53	10:20:00	20.03	18:20:00	18.9
	2:30:00	21.51	10:30:00	20.03	18:30:00	18.8
	2:40:00	21.48	10:40:00	20.16	18:40:00	18.71
	2:50:00	21.42	10:50:00	20.23	18:50:00	18.6
	3:00:00	21.38	11:00:00	20.2	19:00:00	18.51
	3:10:00	21.33	11:10:00	20.24	19:10:00	18.48
	3:20:00	21.27	11:20:00	20.34	19:20:00	18.46
	3:30:00	21.22	11:30:00	20.4	19:30:00	18.41
	3:40:00	21.13	11:40:00	20.36	19:40:00	18.44
	3:50:00	21.11	11:50:00	20.29	19:50:00	18.45
	4:00:00	21.07	12:00:00	20.2	20:00:00	18.5
	4:10:00	21	12:10:00	20.1	20:10:00	19.03
	4:20:00	20.94	12:20:00	20.24	20:20:00	19.49
	4:30:00	20.89	12:30:00	19.58	20:30:00	19.81
	4:40:00	20.79	12:40:00	19.08	20:40:00	20.11
	4:50:00	20.74	12:50:00	18.59	20:50:00	20.38
	5:00:00	20.65	13:00:00	18.81	21:00:00	20.57
	5:10:00	20.55	13:10:00	18.69	21:10:00	20.68
	5:20:00	20.57	13:20:00	18.64	21:20:00	20.84
	5:30:00	20.33	13:30:00	18.67	21:30:00	20.96
	5:40:00	20.04	13:40:00	18.87	21:40:00	21.04
	5:50:00	19.75	13:50:00	18.96	21:50:00	21.05
	6:00:00	19.58	14:00:00	18.8	22:00:00	21.15
	6:10:00	19.49	14:10:00	19.19	22:10:00	21.17
	6:20:00	19.46	14:20:00	18.94	22:20:00	21.22
	6:30:00	19.4	14:30:00	19.32	22:30:00	21.26
6:40:00	19.3	14:40:00	19.23	22:40:00	21.3	
6:50:00	19.21	14:50:00	19.42	22:50:00	21.31	
7:00:00	19.22	15:00:00	19.48	23:00:00	21.38	
7:10:00	19.29	15:10:00	19.61	23:10:00	21.38	
7:20:00	19.37	15:20:00	19.72	23:20:00	21.36	
7:30:00	19.41	15:30:00	19.88	23:30:00	21.33	
7:40:00	19.44	15:40:00	20.23	23:40:00	21.24	
7:50:00	19.45	15:50:00	20.69	23:50:00	21.31	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/3/2008	0:00:00	21.32	8:00:00	19.57	16:00:00	18.85
	0:10:00	21.32	8:10:00	19.58	16:10:00	18.88
	0:20:00	21.28	8:20:00	19.57	16:20:00	18.93
	0:30:00	21.24	8:30:00	19.53	16:30:00	18.97
	0:40:00	21.18	8:40:00	19.51	16:40:00	19.02
	0:50:00	21.12	8:50:00	19.48	16:50:00	19.02
	1:00:00	21.12	9:00:00	19.5	17:00:00	19.1
	1:10:00	21.08	9:10:00	19.56	17:10:00	19.08
	1:20:00	21.03	9:20:00	19.27	17:20:00	19.03
	1:30:00	21.02	9:30:00	19.88	17:30:00	19.02
	1:40:00	21.02	9:40:00	19.49	17:40:00	19.05
	1:50:00	20.94	9:50:00	19.57	17:50:00	19.04
	2:00:00	20.88	10:00:00	19.6	18:00:00	18.98
	2:10:00	20.84	10:10:00	19.71	18:10:00	18.97
	2:20:00	20.81	10:20:00	19.73	18:20:00	18.99
	2:30:00	20.75	10:30:00	19.71	18:30:00	18.97
	2:40:00	20.74	10:40:00	19.03	18:40:00	19.07
	2:50:00	20.68	10:50:00	17.98	18:50:00	19.02
	3:00:00	20.65	11:00:00	18.82	19:00:00	19.19
	3:10:00	20.62	11:10:00	18.34	19:10:00	19.49
	3:20:00	20.59	11:20:00	18.36	19:20:00	19.69
	3:30:00	20.56	11:30:00	19.15	19:30:00	19.95
	3:40:00	20.48	11:40:00	18.86	19:40:00	20.02
	3:50:00	20.47	11:50:00	18.6	19:50:00	20.15
	4:00:00	20.43	12:00:00	18.59	20:00:00	20.25
	4:10:00	20.38	12:10:00	18.65	20:10:00	20.32
	4:20:00	20.31	12:20:00	18.8	20:20:00	20.28
	4:30:00	20.28	12:30:00	18.82	20:30:00	20.38
	4:40:00	20.27	12:40:00	18.86	20:40:00	20.38
	4:50:00	20.14	12:50:00	19.39	20:50:00	20.31
	5:00:00	20.2	13:00:00	18.89	21:00:00	20.31
	5:10:00	20.15	13:10:00	18.89	21:10:00	20.24
	5:20:00	20.13	13:20:00	19.5	21:20:00	20.22
	5:30:00	20.06	13:30:00	18.93	21:30:00	20.27
	5:40:00	20.03	13:40:00	18.89	21:40:00	20.17
	5:50:00	19.99	13:50:00	18.75	21:50:00	20.13
	6:00:00	19.97	14:00:00	18.69	22:00:00	20.13
	6:10:00	19.92	14:10:00	18.65	22:10:00	20.1
	6:20:00	19.87	14:20:00	18.63	22:20:00	20.1
	6:30:00	19.84	14:30:00	18.49	22:30:00	20.03
	6:40:00	19.81	14:40:00	18.66	22:40:00	20
	6:50:00	19.81	14:50:00	18.66	22:50:00	20.04
	7:00:00	19.77	15:00:00	18.6	23:00:00	19.93
	7:10:00	19.74	15:10:00	18.66	23:10:00	19.95
	7:20:00	19.69	15:20:00	18.68	23:20:00	19.89
	7:30:00	19.65	15:30:00	18.77	23:30:00	19.87
	7:40:00	19.64	15:40:00	18.81	23:40:00	19.82
	7:50:00	19.58	15:50:00	18.83	23:50:00	19.86



## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/4/2008	0:00:00	19.81	8:00:00	18.34	16:00:00	19.44
	0:10:00	19.77	8:10:00	18.41	16:10:00	19.54
	0:20:00	19.75	8:20:00	18.41	16:20:00	19.5
	0:30:00	19.75	8:30:00	18.41	16:30:00	19.48
	0:40:00	19.67	8:40:00	18.45	16:40:00	19.79
	0:50:00	19.66	8:50:00	18.41	16:50:00	19.9
	1:00:00	19.63	9:00:00	18.43	17:00:00	19.92
	1:10:00	19.65	9:10:00	18.45	17:10:00	19.8
	1:20:00	19.56	9:20:00	18.49	17:20:00	19.73
	1:30:00	19.52	9:30:00	18.54	17:30:00	19.6
	1:40:00	19.52	9:40:00	18.58	17:40:00	19.38
	1:50:00	19.52	9:50:00	18.6	17:50:00	19.14
	2:00:00	19.49	10:00:00	18.5	18:00:00	18.94
	2:10:00	19.46	10:10:00	18.74	18:10:00	18.61
	2:20:00	19.4	10:20:00	18.84	18:20:00	18.2
	2:30:00	19.44	10:30:00	18.85	18:30:00	18.07
	2:40:00	19.34	10:40:00	18.92	18:40:00	18.15
	2:50:00	19.34	10:50:00	19.03	18:50:00	18.2
	3:00:00	19.29	11:00:00	19.16	19:00:00	18.19
	3:10:00	19.27	11:10:00	19.22	19:10:00	18.2
	3:20:00	19.25	11:20:00	19.33	19:20:00	18.24
	3:30:00	19.19	11:30:00	19.52	19:30:00	18.25
	3:40:00	19.17	11:40:00	19.36	19:40:00	18.22
	3:50:00	19.14	11:50:00	19.65	19:50:00	18.21
	4:00:00	19.08	12:00:00	19.93	20:00:00	18.23
	4:10:00	19.06	12:10:00	20	20:10:00	18.25
	4:20:00	19.02	12:20:00	20.09	20:20:00	18.25
	4:30:00	18.96	12:30:00	20.21	20:30:00	18.21
	4:40:00	18.94	12:40:00	20.11	20:40:00	18.24
	4:50:00	18.94	12:50:00	20.44	20:50:00	18.17
	5:00:00	18.88	13:00:00	20.26	21:00:00	18.26
	5:10:00	18.81	13:10:00	19.49	21:10:00	18.29
	5:20:00	18.83	13:20:00	18.53	21:20:00	18.41
	5:30:00	18.79	13:30:00	18.7	21:30:00	18.67
	5:40:00	18.72	13:40:00	18.76	21:40:00	18.85
	5:50:00	18.72	13:50:00	18.83	21:50:00	19.06
	6:00:00	18.66	14:00:00	19.05	22:00:00	19.21
	6:10:00	18.6	14:10:00	19.05	22:10:00	19.3
	6:20:00	18.56	14:20:00	18.92	22:20:00	19.45
	6:30:00	18.59	14:30:00	18.98	22:30:00	19.54
	6:40:00	18.53	14:40:00	18.94	22:40:00	19.67
	6:50:00	18.51	14:50:00	18.92	22:50:00	19.76
	7:00:00	18.47	15:00:00	19.05	23:00:00	19.82
	7:10:00	18.49	15:10:00	19.06	23:10:00	19.85
	7:20:00	18.47	15:20:00	19.03	23:20:00	19.85
	7:30:00	18.42	15:30:00	19.18	23:30:00	19.92
	7:40:00	18.44	15:40:00	19.2	23:40:00	19.91
	7:50:00	18.42	15:50:00	19.38	23:50:00	19.93

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/5/2008	0:00:00	19.96	8:00:00	19.24	16:00:00	18.42
	0:10:00	20.01	8:10:00	19.3	16:10:00	18.34
	0:20:00	19.97	8:20:00	19.28	16:20:00	18.33
	0:30:00	19.96	8:30:00	19.24	16:30:00	19.13
	0:40:00	19.99	8:40:00	19.28	16:40:00	18.19
	0:50:00	19.93	8:50:00	19.31	16:50:00	18.17
	1:00:00	19.96	9:00:00	19.31	17:00:00	18.07
	1:10:00	19.89	9:10:00	19.28	17:10:00	18.31
	1:20:00	19.91	9:20:00	19.33	17:20:00	18.31
	1:30:00	19.9	9:30:00	19.21	17:30:00	18.33
	1:40:00	19.88	9:40:00	19.37	17:40:00	18.39
	1:50:00	19.88	9:50:00	19.43	17:50:00	18.42
	2:00:00	19.84	10:00:00	19.4	18:00:00	18.27
	2:10:00	19.82	10:10:00	19.19	18:10:00	18.1
	2:20:00	19.78	10:20:00	19.4	18:20:00	17.88
	2:30:00	19.74	10:30:00	19.54	18:30:00	17.77
	2:40:00	19.76	10:40:00	19.36	18:40:00	17.66
	2:50:00	19.73	10:50:00	19.68	18:50:00	17.49
	3:00:00	19.69	11:00:00	19.69	19:00:00	17.38
	3:10:00	19.67	11:10:00	19.72	19:10:00	17.36
	3:20:00	19.58	11:20:00	19.83	19:20:00	17.39
	3:30:00	19.61	11:30:00	19.81	19:30:00	17.42
	3:40:00	19.62	11:40:00	19.84	19:40:00	17.4
	3:50:00	19.62	11:50:00	19.84	19:50:00	17.38
	4:00:00	19.61	12:00:00	19.76	20:00:00	17.4
	4:10:00	19.54	12:10:00	19.88	20:10:00	17.38
	4:20:00	19.5	12:20:00	19.97	20:20:00	17.4
	4:30:00	19.53	12:30:00	19.97	20:30:00	17.35
	4:40:00	19.49	12:40:00	20.05	20:40:00	17.4
	4:50:00	19.45	12:50:00	20.09	20:50:00	17.31
	5:00:00	19.48	13:00:00	20.08	21:00:00	17.34
	5:10:00	19.49	13:10:00	20.6	21:10:00	17.29
	5:20:00	19.43	13:20:00	20.4	21:20:00	17.34
	5:30:00	19.41	13:30:00	20.44	21:30:00	17.31
	5:40:00	19.39	13:40:00	20.5	21:40:00	17.34
	5:50:00	19.38	13:50:00	20.55	21:50:00	17.36
	6:00:00	19.36	14:00:00	20.57	22:00:00	17.36
	6:10:00	19.34	14:10:00	20.68	22:10:00	17.36
	6:20:00	19.29	14:20:00	20.73	22:20:00	17.36
	6:30:00	19.3	14:30:00	20.72	22:30:00	17.42
	6:40:00	19.32	14:40:00	20.71	22:40:00	17.44
	6:50:00	19.26	14:50:00	21.14	22:50:00	17.6
	7:00:00	19.29	15:00:00	20.83	23:00:00	17.77
	7:10:00	19.26	15:10:00	20.8	23:10:00	18.03
	7:20:00	19.26	15:20:00	20.75	23:20:00	18.23
	7:30:00	19.25	15:30:00	19.95	23:30:00	18.43
	7:40:00	19.25	15:40:00	18.77	23:40:00	18.6
	7:50:00	19.28	15:50:00	18.46	23:50:00	18.75

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/6/2008	0:00:00	18.89	8:00:00	19.74	16:00:00	20.11
	0:10:00	18.99	8:10:00	19.78	16:10:00	20.19
	0:20:00	19.06	8:20:00	19.77	16:20:00	20.29
	0:30:00	19.21	8:30:00	19.81	16:30:00	20.35
	0:40:00	19.24	8:40:00	19.77	16:40:00	20.48
	0:50:00	19.32	8:50:00	19.76	16:50:00	20.55
	1:00:00	19.39	9:00:00	19.8	17:00:00	20.61
	1:10:00	19.43	9:10:00	19.85	17:10:00	20.83
	1:20:00	19.48	9:20:00	19.85	17:20:00	21.17
	1:30:00	19.54	9:30:00	19.87	17:30:00	21.61
	1:40:00	19.56	9:40:00	19.8	17:40:00	21.8
	1:50:00	19.56	9:50:00	19.87	17:50:00	22.06
	2:00:00	19.61	10:00:00	19.87	18:00:00	22.2
	2:10:00	19.63	10:10:00	19.93	18:10:00	22.27
	2:20:00	19.65	10:20:00	19.91	18:20:00	22.3
	2:30:00	19.67	10:30:00	19.98	18:30:00	22.33
	2:40:00	19.69	10:40:00	20.02	18:40:00	22.34
	2:50:00	19.69	10:50:00	20.02	18:50:00	22.31
	3:00:00	19.69	11:00:00	20.15	19:00:00	22.25
	3:10:00	19.72	11:10:00	20.17	19:10:00	22.18
	3:20:00	19.72	11:20:00	20.24	19:20:00	22.14
	3:30:00	19.69	11:30:00	20.35	19:30:00	22.1
	3:40:00	19.72	11:40:00	20.34	19:40:00	22.01
	3:50:00	19.74	11:50:00	20.67	19:50:00	21.9
	4:00:00	19.74	12:00:00	20.78	20:00:00	21.9
	4:10:00	19.74	12:10:00	20.94	20:10:00	21.79
	4:20:00	19.73	12:20:00	21.15	20:20:00	21.75
	4:30:00	19.74	12:30:00	21.12	20:30:00	21.61
	4:40:00	19.72	12:40:00	21.34	20:40:00	21.61
	4:50:00	19.74	12:50:00	21.54	20:50:00	21.56
	5:00:00	19.74	13:00:00	21.61	21:00:00	21.5
	5:10:00	19.76	13:10:00	21.49	21:10:00	21.43
	5:20:00	19.74	13:20:00	21.95	21:20:00	21.38
	5:30:00	19.76	13:30:00	22.17	21:30:00	21.29
	5:40:00	19.76	13:40:00	22.39	21:40:00	21.24
	5:50:00	19.74	13:50:00	22.57	21:50:00	21.2
	6:00:00	19.74	14:00:00	22.68	22:00:00	21.16
	6:10:00	19.8	14:10:00	22.83	22:10:00	21.09
	6:20:00	19.8	14:20:00	23.02	22:20:00	21.1
	6:30:00	19.76	14:30:00	22.99	22:30:00	21.03
6:40:00	19.78	14:40:00	23.09	22:40:00	20.96	
6:50:00	19.76	14:50:00	23.02	22:50:00	20.92	
7:00:00	19.78	15:00:00	22.81	23:00:00	20.88	
7:10:00	19.8	15:10:00	22.6	23:10:00	20.83	
7:20:00	19.78	15:20:00	22.02	23:20:00	20.81	
7:30:00	19.76	15:30:00	21.06	23:30:00	20.79	
7:40:00	19.78	15:40:00	20.4	23:40:00	20.78	
7:50:00	19.72	15:50:00	20.12	23:50:00	20.73	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/7/2008	0:00:00	20.7	8:00:00	19.96	16:00:00	19.62
	0:10:00	20.68	8:10:00	19.99	16:10:00	19.53
	0:20:00	20.61	8:20:00	20	16:20:00	19.41
	0:30:00	20.57	8:30:00	20	16:30:00	19.25
	0:40:00	20.55	8:40:00	20.08	16:40:00	19.28
	0:50:00	20.55	8:50:00	20.05	16:50:00	19.25
	1:00:00	20.56	9:00:00	20.11	17:00:00	19.25
	1:10:00	20.49	9:10:00	20.15	17:10:00	19.31
	1:20:00	20.49	9:20:00	20.24	17:20:00	19.4
	1:30:00	20.51	9:30:00	20.27	17:30:00	19.29
	1:40:00	20.48	9:40:00	20.36	17:40:00	19.18
	1:50:00	20.45	9:50:00	20.35	17:50:00	19.07
	2:00:00	20.39	10:00:00	20.43	18:00:00	19.05
	2:10:00	20.37	10:10:00	20.43	18:10:00	19.05
	2:20:00	20.36	10:20:00	20.58	18:20:00	18.94
	2:30:00	20.37	10:30:00	20.67	18:30:00	18.86
	2:40:00	20.35	10:40:00	20.69	18:40:00	18.8
	2:50:00	20.31	10:50:00	20.8	18:50:00	18.59
	3:00:00	20.26	11:00:00	20.72	19:00:00	18.5
	3:10:00	20.24	11:10:00	20.92	19:10:00	18.35
	3:20:00	20.21	11:20:00	20.95	19:20:00	18.2
	3:30:00	20.16	11:30:00	20.93	19:30:00	18.03
	3:40:00	20.17	11:40:00	21.39	19:40:00	17.86
	3:50:00	20.05	11:50:00	21.65	19:50:00	17.72
	4:00:00	20.17	12:00:00	21.68	20:00:00	17.66
	4:10:00	20.11	12:10:00	21.44	20:10:00	17.64
	4:20:00	20.08	12:20:00	21.64	20:20:00	17.59
	4:30:00	20.09	12:30:00	21.66	20:30:00	17.54
	4:40:00	20.08	12:40:00	21.77	20:40:00	17.5
	4:50:00	20.09	12:50:00	21.98	20:50:00	17.42
	5:00:00	20.08	13:00:00	22.25	21:00:00	17.36
	5:10:00	20.04	13:10:00	22.23	21:10:00	17.36
	5:20:00	20.04	13:20:00	22.25	21:20:00	17.36
	5:30:00	19.91	13:30:00	22.39	21:30:00	17.32
	5:40:00	19.98	13:40:00	22.54	21:40:00	17.35
	5:50:00	19.93	13:50:00	22.59	21:50:00	17.3
	6:00:00	19.97	14:00:00	22.59	22:00:00	17.35
	6:10:00	19.99	14:10:00	22.45	22:10:00	17.36
	6:20:00	19.91	14:20:00	21.58	22:20:00	17.4
	6:30:00	19.91	14:30:00	20.43	22:30:00	17.48
	6:40:00	19.91	14:40:00	19.96	22:40:00	17.68
	6:50:00	19.91	14:50:00	19.82	22:50:00	18.01
	7:00:00	19.9	15:00:00	19.89	23:00:00	18.25
	7:10:00	19.91	15:10:00	19.81	23:10:00	18.48
	7:20:00	19.87	15:20:00	19.88	23:20:00	18.71
	7:30:00	19.92	15:30:00	19.77	23:30:00	18.9
	7:40:00	19.92	15:40:00	19.66	23:40:00	19.04
	7:50:00	19.92	15:50:00	19.75	23:50:00	19.16

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/8/2008	0:00:00	19.29	8:00:00	18.78	16:00:00	18.82
	0:10:00	19.37	8:10:00	18.8	16:10:00	18.71
	0:20:00	19.4	8:20:00	18.77	16:20:00	19.04
	0:30:00	19.53	8:30:00	18.8	16:30:00	19.08
	0:40:00	19.5	8:40:00	18.75	16:40:00	18.8
	0:50:00	19.56	8:50:00	18.8	16:50:00	18.78
	1:00:00	19.62	9:00:00	18.83	17:00:00	18.84
	1:10:00	19.62	9:10:00	18.9	17:10:00	18.89
	1:20:00	19.63	9:20:00	18.91	17:20:00	18.94
	1:30:00	19.63	9:30:00	18.89	17:30:00	18.81
	1:40:00	19.58	9:40:00	18.93	17:40:00	18.74
	1:50:00	19.63	9:50:00	18.77	17:50:00	18.78
	2:00:00	19.61	10:00:00	19.66	18:00:00	18.77
	2:10:00	19.58	10:10:00	19.09	18:10:00	18.79
	2:20:00	19.61	10:20:00	19.72	18:20:00	18.74
	2:30:00	19.58	10:30:00	19.24	18:30:00	18.71
	2:40:00	19.58	10:40:00	19.2	18:40:00	18.7
	2:50:00	19.56	10:50:00	19.22	18:50:00	18.69
	3:00:00	19.58	11:00:00	19.67	19:00:00	18.67
	3:10:00	19.57	11:10:00	19.39	19:10:00	18.58
	3:20:00	19.58	11:20:00	19.22	19:20:00	18.54
	3:30:00	19.55	11:30:00	19.57	19:30:00	18.47
	3:40:00	19.5	11:40:00	20.23	19:40:00	18.41
	3:50:00	19.48	11:50:00	20.12	19:50:00	18.39
	4:00:00	19.48	12:00:00	20.09	20:00:00	18.3
	4:10:00	19.45	12:10:00	20.25	20:10:00	18.25
	4:20:00	19.36	12:20:00	20.29	20:20:00	18.22
	4:30:00	19.36	12:30:00	20.18	20:30:00	18.11
	4:40:00	19.36	12:40:00	20.43	20:40:00	18.01
	4:50:00	19.32	12:50:00	20.56	20:50:00	17.94
	5:00:00	19.31	13:00:00	20.53	21:00:00	17.86
	5:10:00	19.3	13:10:00	20.4	21:10:00	17.82
	5:20:00	19.24	13:20:00	18.86	21:20:00	17.71
	5:30:00	19.2	13:30:00	18.75	21:30:00	17.66
	5:40:00	19.19	13:40:00	19.06	21:40:00	17.62
	5:50:00	19.16	13:50:00	19.07	21:50:00	17.62
	6:00:00	19.15	14:00:00	19.14	22:00:00	17.62
	6:10:00	19.1	14:10:00	19.24	22:10:00	17.58
	6:20:00	19.02	14:20:00	19.16	22:20:00	17.58
	6:30:00	19.05	14:30:00	19.22	22:30:00	17.53
6:40:00	18.99	14:40:00	19.27	22:40:00	17.53	
6:50:00	18.95	14:50:00	19.24	22:50:00	17.53	
7:00:00	18.96	15:00:00	19.21	23:00:00	17.51	
7:10:00	18.94	15:10:00	19.24	23:10:00	17.48	
7:20:00	18.84	15:20:00	19.06	23:20:00	17.4	
7:30:00	18.88	15:30:00	19.04	23:30:00	17.36	
7:40:00	18.78	15:40:00	18.93	23:40:00	17.31	
7:50:00	18.8	15:50:00	18.86	23:50:00	17.3	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/9/2008	0:00:00	17.28	8:00:00	16.63	16:00:00	19.74
	0:10:00	17.26	8:10:00	16.65	16:10:00	19.96
	0:20:00	17.22	8:20:00	16.71	16:20:00	20.06
	0:30:00	17.19	8:30:00	16.79	16:30:00	20.29
	0:40:00	17.22	8:40:00	16.86	16:40:00	20.37
	0:50:00	17.17	8:50:00	17.02	16:50:00	20.57
	1:00:00	17.17	9:00:00	17.06	17:00:00	20.58
	1:10:00	17.13	9:10:00	17.08	17:10:00	20.75
	1:20:00	17.1	9:20:00	17.18	17:20:00	20.85
	1:30:00	17.11	9:30:00	17.36	17:30:00	20.94
	1:40:00	17.12	9:40:00	17.22	17:40:00	21.04
	1:50:00	17.13	9:50:00	17.63	17:50:00	21
	2:00:00	17.07	10:00:00	17.78	18:00:00	21.04
	2:10:00	17.05	10:10:00	17.83	18:10:00	20.95
	2:20:00	16.99	10:20:00	17.84	18:20:00	20.99
	2:30:00	16.96	10:30:00	18.02	18:30:00	21.02
	2:40:00	16.99	10:40:00	18.2	18:40:00	21.06
	2:50:00	16.92	10:50:00	18.29	18:50:00	21.08
	3:00:00	16.94	11:00:00	18.42	19:00:00	21.05
	3:10:00	16.92	11:10:00	18.59	19:10:00	21.02
	3:20:00	16.94	11:20:00	18.77	19:20:00	20.97
	3:30:00	16.93	11:30:00	19.24	19:30:00	20.96
	3:40:00	16.93	11:40:00	18.98	19:40:00	20.96
	3:50:00	16.92	11:50:00	18.91	19:50:00	20.81
	4:00:00	16.93	12:00:00	19.03	20:00:00	20.79
	4:10:00	16.91	12:10:00	18.9	20:10:00	20.65
	4:20:00	16.9	12:20:00	18	20:20:00	20.65
	4:30:00	16.9	12:30:00	17.96	20:30:00	20.52
	4:40:00	16.9	12:40:00	18.92	20:40:00	20.5
	4:50:00	16.87	12:50:00	18.3	20:50:00	20.45
	5:00:00	16.86	13:00:00	18.41	21:00:00	20.35
	5:10:00	16.81	13:10:00	18.6	21:10:00	20.24
	5:20:00	16.79	13:20:00	18.66	21:20:00	20.2
	5:30:00	16.82	13:30:00	18.6	21:30:00	20.13
	5:40:00	16.75	13:40:00	18.78	21:40:00	20.04
	5:50:00	16.71	13:50:00	18.78	21:50:00	20.01
	6:00:00	16.69	14:00:00	18.69	22:00:00	19.91
	6:10:00	16.65	14:10:00	18.75	22:10:00	19.8
	6:20:00	16.63	14:20:00	18.67	22:20:00	19.76
	6:30:00	16.55	14:30:00	18.75	22:30:00	19.68
	6:40:00	16.57	14:40:00	18.89	22:40:00	19.61
	6:50:00	16.53	14:50:00	19.12	22:50:00	19.55
	7:00:00	16.48	15:00:00	19.07	23:00:00	19.49
	7:10:00	16.44	15:10:00	19.07	23:10:00	19.39
	7:20:00	16.46	15:20:00	19.28	23:20:00	19.32
	7:30:00	16.45	15:30:00	19.5	23:30:00	19.24
	7:40:00	16.54	15:40:00	19.53	23:40:00	19.2
	7:50:00	16.55	15:50:00	19.82	23:50:00	19.15

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/10/2008	0:00:00	19.07	8:00:00	17.36	16:00:00	21.64
	0:10:00	18.97	8:10:00	17.34	16:10:00	21.61
	0:20:00	18.94	8:20:00	17.38	16:20:00	21.74
	0:30:00	18.85	8:30:00	17.36	16:30:00	21.8
	0:40:00	18.82	8:40:00	17.42	16:40:00	21.93
	0:50:00	18.73	8:50:00	17.44	16:50:00	22.06
	1:00:00	18.69	9:00:00	17.54	17:00:00	22.15
	1:10:00	18.63	9:10:00	17.52	17:10:00	22.27
	1:20:00	18.59	9:20:00	17.63	17:20:00	22.25
	1:30:00	18.51	9:30:00	17.67	17:30:00	22.31
	1:40:00	18.55	9:40:00	17.67	17:40:00	22.16
	1:50:00	18.48	9:50:00	17.76	17:50:00	22.23
	2:00:00	18.42	10:00:00	17.76	18:00:00	22.35
	2:10:00	18.41	10:10:00	17.78	18:10:00	22.36
	2:20:00	18.35	10:20:00	18.43	18:20:00	22.33
	2:30:00	18.22	10:30:00	17.88	18:30:00	22.24
	2:40:00	18.23	10:40:00	17.87	18:40:00	22.23
	2:50:00	18.24	10:50:00	18	18:50:00	22.1
	3:00:00	18.19	11:00:00	18.12	19:00:00	21.99
	3:10:00	18.17	11:10:00	18.97	19:10:00	21.87
	3:20:00	18.08	11:20:00	18.41	19:20:00	21.76
	3:30:00	18.06	11:30:00	18.49	19:30:00	21.7
	3:40:00	18.01	11:40:00	18.72	19:40:00	21.53
	3:50:00	17.97	11:50:00	18.86	19:50:00	21.35
	4:00:00	17.92	12:00:00	18.97	20:00:00	21.16
	4:10:00	17.86	12:10:00	19.04	20:10:00	21.03
	4:20:00	17.88	12:20:00	19.2	20:20:00	20.83
	4:30:00	17.88	12:30:00	19.41	20:30:00	20.7
	4:40:00	17.85	12:40:00	19.61	20:40:00	20.57
	4:50:00	17.75	12:50:00	19.69	20:50:00	20.41
	5:00:00	17.75	13:00:00	19.63	21:00:00	20.36
	5:10:00	17.73	13:10:00	19.72	21:10:00	20.2
	5:20:00	17.67	13:20:00	19.74	21:20:00	20.09
	5:30:00	17.67	13:30:00	20.44	21:30:00	19.9
	5:40:00	17.6	13:40:00	20.04	21:40:00	19.8
5:50:00	17.58	13:50:00	20.13	21:50:00	19.75	
6:00:00	17.6	14:00:00	20.35	22:00:00	19.62	
6:10:00	17.63	14:10:00	20.55	22:10:00	19.48	
6:20:00	17.56	14:20:00	20.65	22:20:00	19.39	
6:30:00	17.47	14:30:00	20.63	22:30:00	19.3	
6:40:00	17.46	14:40:00	20.83	22:40:00	19.21	
6:50:00	17.46	14:50:00	20.94	22:50:00	19.08	
7:00:00	17.46	15:00:00	20.99	23:00:00	19.06	
7:10:00	17.42	15:10:00	21.12	23:10:00	18.93	
7:20:00	17.4	15:20:00	21.29	23:20:00	18.84	
7:30:00	17.41	15:30:00	21.38	23:30:00	18.73	
7:40:00	17.39	15:40:00	21.52	23:40:00	18.67	
7:50:00	17.34	15:50:00	21.41	23:50:00	18.58	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/11/2008	0:00:00	18.54	8:00:00	17.05	16:00:00	18.88
	0:10:00	18.45	8:10:00	17.16	16:10:00	19.05
	0:20:00	18.43	8:20:00	17.11	16:20:00	19.03
	0:30:00	18.32	8:30:00	17.15	16:30:00	19.03
	0:40:00	18.3	8:40:00	17.13	16:40:00	19.04
	0:50:00	18.26	8:50:00	17.12	16:50:00	19.16
	1:00:00	18.22	9:00:00	17.18	17:00:00	19.25
	1:10:00	18.18	9:10:00	17.2	17:10:00	19.24
	1:20:00	18.09	9:20:00	17.16	17:20:00	19.22
	1:30:00	18.07	9:30:00	17.51	17:30:00	19.25
	1:40:00	18.05	9:40:00	17.34	17:40:00	19.3
	1:50:00	17.99	9:50:00	17.36	17:50:00	19.34
	2:00:00	17.98	10:00:00	18.19	18:00:00	19.33
	2:10:00	17.98	10:10:00	17.5	18:10:00	19.46
	2:20:00	17.88	10:20:00	17.74	18:20:00	19.52
	2:30:00	17.86	10:30:00	17.71	18:30:00	19.56
	2:40:00	17.83	10:40:00	17.79	18:40:00	19.48
	2:50:00	17.79	10:50:00	17.86	18:50:00	19.51
	3:00:00	17.79	11:00:00	17.88	19:00:00	19.6
	3:10:00	17.75	11:10:00	18.01	19:10:00	19.56
	3:20:00	17.73	11:20:00	18.03	19:20:00	19.58
	3:30:00	17.71	11:30:00	18.03	19:30:00	19.52
	3:40:00	17.68	11:40:00	18.03	19:40:00	19.5
	3:50:00	17.62	11:50:00	18.14	19:50:00	19.63
	4:00:00	17.62	12:00:00	18.19	20:00:00	19.61
	4:10:00	17.6	12:10:00	18.2	20:10:00	19.5
	4:20:00	17.61	12:20:00	18.46	20:20:00	19.45
	4:30:00	17.56	12:30:00	18.44	20:30:00	19.5
	4:40:00	17.51	12:40:00	18.59	20:40:00	19.39
	4:50:00	17.52	12:50:00	18.59	20:50:00	19.37
	5:00:00	17.5	13:00:00	18.66	21:00:00	19.39
	5:10:00	17.48	13:10:00	18.72	21:10:00	19.26
	5:20:00	17.44	13:20:00	18.53	21:20:00	19.28
	5:30:00	17.44	13:30:00	17.5	21:30:00	19.19
	5:40:00	17.41	13:40:00	17.54	21:40:00	19.15
	5:50:00	17.39	13:50:00	17.82	21:50:00	19.06
	6:00:00	17.34	14:00:00	18.01	22:00:00	19.04
	6:10:00	17.31	14:10:00	18.21	22:10:00	19.02
	6:20:00	17.29	14:20:00	18.22	22:20:00	18.93
	6:30:00	17.27	14:30:00	18.5	22:30:00	18.84
	6:40:00	17.29	14:40:00	18.46	22:40:00	18.75
	6:50:00	17.25	14:50:00	18.57	22:50:00	18.71
	7:00:00	17.26	15:00:00	18.71	23:00:00	18.65
	7:10:00	17.19	15:10:00	18.73	23:10:00	18.56
	7:20:00	17.2	15:20:00	18.68	23:20:00	18.51
	7:30:00	17.14	15:30:00	18.74	23:30:00	18.45
	7:40:00	17.18	15:40:00	18.74	23:40:00	18.38
	7:50:00	17.15	15:50:00	18.78	23:50:00	18.29



## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/12/2008	0:00:00	18.24	8:00:00	16.12	16:00:00	22.19
	0:10:00	18.22	8:10:00	16.1	16:10:00	22.24
	0:20:00	18.11	8:20:00	16.13	16:20:00	22.23
	0:30:00	18.06	8:30:00	16.22	16:30:00	22.29
	0:40:00	18.05	8:40:00	16.17	16:40:00	22.18
	0:50:00	17.96	8:50:00	16.23	16:50:00	22.12
	1:00:00	17.89	9:00:00	16.3	17:00:00	22.11
	1:10:00	17.87	9:10:00	16.36	17:10:00	22.28
	1:20:00	17.82	9:20:00	16.42	17:20:00	22.22
	1:30:00	17.73	9:30:00	16.51	17:30:00	22.09
	1:40:00	17.71	9:40:00	16.45	17:40:00	22.07
	1:50:00	17.64	9:50:00	16.53	17:50:00	22.16
	2:00:00	17.58	10:00:00	16.86	18:00:00	22.16
	2:10:00	17.56	10:10:00	16.94	18:10:00	22.05
	2:20:00	17.48	10:20:00	16.89	18:20:00	21.99
	2:30:00	17.46	10:30:00	17.14	18:30:00	21.94
	2:40:00	17.41	10:40:00	17.25	18:40:00	21.87
	2:50:00	17.41	10:50:00	17.38	18:50:00	21.77
	3:00:00	17.35	11:00:00	17.37	19:00:00	21.75
	3:10:00	17.32	11:10:00	17.56	19:10:00	21.59
	3:20:00	17.26	11:20:00	17.7	19:20:00	21.56
	3:30:00	17.19	11:30:00	17.87	19:30:00	21.4
	3:40:00	17.14	11:40:00	18.38	19:40:00	21.35
	3:50:00	17.12	11:50:00	18.2	19:50:00	21.13
	4:00:00	17.06	12:00:00	18.39	20:00:00	21.07
	4:10:00	17.02	12:10:00	18.51	20:10:00	20.88
	4:20:00	16.95	12:20:00	18.48	20:20:00	20.76
	4:30:00	16.91	12:30:00	18.69	20:30:00	20.63
	4:40:00	16.86	12:40:00	19.04	20:40:00	20.5
	4:50:00	16.83	12:50:00	19.21	20:50:00	20.44
	5:00:00	16.78	13:00:00	19.26	21:00:00	20.31
	5:10:00	16.73	13:10:00	19.42	21:10:00	20.24
	5:20:00	16.7	13:20:00	19.55	21:20:00	20.11
	5:30:00	16.61	13:30:00	19.62	21:30:00	20
	5:40:00	16.57	13:40:00	19.88	21:40:00	19.91
	5:50:00	16.55	13:50:00	19.92	21:50:00	19.85
	6:00:00	16.46	14:00:00	20.25	22:00:00	19.69
	6:10:00	16.44	14:10:00	20.32	22:10:00	19.65
	6:20:00	16.43	14:20:00	20.55	22:20:00	19.54
	6:30:00	16.34	14:30:00	20.83	22:30:00	19.44
6:40:00	16.3	14:40:00	20.91	22:40:00	19.36	
6:50:00	16.3	14:50:00	21.05	22:50:00	19.26	
7:00:00	16.25	15:00:00	21.38	23:00:00	19.17	
7:10:00	16.17	15:10:00	21.52	23:10:00	19.09	
7:20:00	16.15	15:20:00	21.66	23:20:00	19.07	
7:30:00	16.16	15:30:00	21.87	23:30:00	18.96	
7:40:00	16.1	15:40:00	21.82	23:40:00	18.91	
7:50:00	16.12	15:50:00	22.1	23:50:00	18.79	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/13/2008	0:00:00	18.74	8:00:00	16.66	16:00:00	23.61
	0:10:00	18.66	8:10:00	16.68	16:10:00	23.9
	0:20:00	18.58	8:20:00	16.66	16:20:00	24.03
	0:30:00	18.51	8:30:00	16.63	16:30:00	24.06
	0:40:00	18.45	8:40:00	16.65	16:40:00	24.13
	0:50:00	18.38	8:50:00	16.7	16:50:00	24.2
	1:00:00	18.32	9:00:00	16.72	17:00:00	24.18
	1:10:00	18.21	9:10:00	16.79	17:10:00	24.36
	1:20:00	18.17	9:20:00	16.9	17:20:00	24.28
	1:30:00	18.14	9:30:00	17.01	17:30:00	24.42
	1:40:00	18.06	9:40:00	17.1	17:40:00	24.34
	1:50:00	18.01	9:50:00	17.12	17:50:00	24.39
	2:00:00	17.99	10:00:00	17.23	18:00:00	24.37
	2:10:00	17.9	10:10:00	17.35	18:10:00	24.23
	2:20:00	17.9	10:20:00	17.2	18:20:00	24.23
	2:30:00	17.84	10:30:00	17.7	18:30:00	24.21
	2:40:00	17.77	10:40:00	17.65	18:40:00	24.16
	2:50:00	17.73	10:50:00	17.44	18:50:00	23.95
	3:00:00	17.71	11:00:00	17.84	19:00:00	23.81
	3:10:00	17.6	11:10:00	18.02	19:10:00	23.69
	3:20:00	17.63	11:20:00	18.18	19:20:00	23.61
	3:30:00	17.56	11:30:00	18.42	19:30:00	23.46
	3:40:00	17.5	11:40:00	18.55	19:40:00	23.32
	3:50:00	17.47	11:50:00	18.79	19:50:00	23.17
	4:00:00	17.42	12:00:00	18.96	20:00:00	23.01
	4:10:00	17.41	12:10:00	19.07	20:10:00	22.93
	4:20:00	17.35	12:20:00	18.91	20:20:00	22.77
	4:30:00	17.27	12:30:00	19.35	20:30:00	22.65
	4:40:00	17.14	12:40:00	19.76	20:40:00	22.43
	4:50:00	17.24	12:50:00	19.92	20:50:00	22.35
	5:00:00	17.22	13:00:00	20.03	21:00:00	22.14
	5:10:00	17.17	13:10:00	20.34	21:10:00	22.03
	5:20:00	17.11	13:20:00	20.51	21:20:00	21.86
	5:30:00	17.12	13:30:00	20.49	21:30:00	21.72
	5:40:00	17.06	13:40:00	20.84	21:40:00	21.59
	5:50:00	17.03	13:50:00	21.06	21:50:00	21.44
	6:00:00	16.95	14:00:00	21.19	22:00:00	21.33
	6:10:00	16.83	14:10:00	21.27	22:10:00	21.2
	6:20:00	16.94	14:20:00	21.41	22:20:00	21.1
	6:30:00	16.88	14:30:00	21.55	22:30:00	20.94
	6:40:00	16.81	14:40:00	21.77	22:40:00	20.79
	6:50:00	16.79	14:50:00	22.07	22:50:00	20.72
	7:00:00	16.78	15:00:00	22.24	23:00:00	20.64
	7:10:00	16.67	15:10:00	22.45	23:10:00	20.48
	7:20:00	16.71	15:20:00	22.74	23:20:00	20.4
	7:30:00	16.73	15:30:00	23.02	23:30:00	20.27
	7:40:00	16.71	15:40:00	23.21	23:40:00	20.17
	7:50:00	16.66	15:50:00	23.47	23:50:00	20.05

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/14/2008	0:00:00	19.96	8:00:00	17.29	16:00:00	19.21
	0:10:00	19.85	8:10:00	17.34	16:10:00	18.46
	0:20:00	19.74	8:20:00	17.32	16:20:00	18.79
	0:30:00	19.63	8:30:00	17.32	16:30:00	18.85
	0:40:00	19.52	8:40:00	17.38	16:40:00	18.98
	0:50:00	19.48	8:50:00	17.43	16:50:00	19.07
	1:00:00	19.39	9:00:00	17.49	17:00:00	18.98
	1:10:00	19.28	9:10:00	17.47	17:10:00	18.85
	1:20:00	19.2	9:20:00	17.51	17:20:00	18.9
	1:30:00	19.13	9:30:00	17.53	17:30:00	18.74
	1:40:00	19.07	9:40:00	17.48	17:40:00	18.84
	1:50:00	18.99	9:50:00	17.34	17:50:00	18.96
	2:00:00	18.91	10:00:00	17.48	18:00:00	18.95
	2:10:00	18.83	10:10:00	17.53	18:10:00	18.88
	2:20:00	18.75	10:20:00	17.83	18:20:00	18.74
	2:30:00	18.71	10:30:00	17.71	18:30:00	18.68
	2:40:00	18.65	10:40:00	17.87	18:40:00	18.48
	2:50:00	18.56	10:50:00	18.3	18:50:00	18.33
	3:00:00	18.49	11:00:00	18.42	19:00:00	18.33
	3:10:00	18.45	11:10:00	18.56	19:10:00	18.26
	3:20:00	18.41	11:20:00	19.38	19:20:00	18.29
	3:30:00	18.38	11:30:00	19.78	19:30:00	18.27
	3:40:00	18.29	11:40:00	19.32	19:40:00	18.25
	3:50:00	18.27	11:50:00	19.36	19:50:00	18.21
	4:00:00	18.2	12:00:00	19.63	20:00:00	18.21
	4:10:00	18.12	12:10:00	19.74	20:10:00	18.1
	4:20:00	18.08	12:20:00	19.96	20:20:00	18.1
	4:30:00	18.07	12:30:00	20.1	20:30:00	18.02
	4:40:00	17.99	12:40:00	20.29	20:40:00	17.94
	4:50:00	17.96	12:50:00	20.34	20:50:00	17.88
	5:00:00	17.86	13:00:00	20.45	21:00:00	17.88
	5:10:00	17.87	13:10:00	20.51	21:10:00	17.86
	5:20:00	17.84	13:20:00	20.58	21:20:00	17.79
	5:30:00	17.74	13:30:00	20.62	21:30:00	17.82
	5:40:00	17.75	13:40:00	20.64	21:40:00	17.77
	5:50:00	17.66	13:50:00	20.72	21:50:00	17.72
	6:00:00	17.66	14:00:00	20.75	22:00:00	17.64
	6:10:00	17.63	14:10:00	20.65	22:10:00	17.7
	6:20:00	17.55	14:20:00	20.78	22:20:00	17.68
	6:30:00	17.53	14:30:00	20.75	22:30:00	17.62
6:40:00	17.53	14:40:00	20.75	22:40:00	17.58	
6:50:00	17.49	14:50:00	20.94	22:50:00	17.55	
7:00:00	17.41	15:00:00	21.03	23:00:00	17.51	
7:10:00	17.37	15:10:00	21.31	23:10:00	17.47	
7:20:00	17.37	15:20:00	21.16	23:20:00	17.44	
7:30:00	17.37	15:30:00	20.81	23:30:00	17.4	
7:40:00	17.3	15:40:00	20.28	23:40:00	17.38	
7:50:00	17.35	15:50:00	19.19	23:50:00	17.34	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/15/2008	0:00:00	17.34	8:00:00	17.17	16:00:00	19.45
	0:10:00	17.29	8:10:00	17.18	16:10:00	19.63
	0:20:00	17.34	8:20:00	17.11	16:20:00	19.76
	0:30:00	17.31	8:30:00	17.12	16:30:00	19.87
	0:40:00	17.34	8:40:00	17.15	16:40:00	19.93
	0:50:00	17.38	8:50:00	17.16	16:50:00	20.15
	1:00:00	17.38	9:00:00	17.12	17:00:00	20.06
	1:10:00	17.42	9:10:00	17.13	17:10:00	20.28
	1:20:00	17.46	9:20:00	17.15	17:20:00	20.37
	1:30:00	17.48	9:30:00	17.03	17:30:00	20.39
	1:40:00	17.51	9:40:00	17.18	17:40:00	20.5
	1:50:00	17.52	9:50:00	17.25	17:50:00	20.61
	2:00:00	17.49	10:00:00	17.23	18:00:00	20.59
	2:10:00	17.51	10:10:00	17.29	18:10:00	20.55
	2:20:00	17.55	10:20:00	17.6	18:20:00	20.52
	2:30:00	17.55	10:30:00	17.47	18:30:00	20.61
	2:40:00	17.59	10:40:00	17.37	18:40:00	20.52
	2:50:00	17.54	10:50:00	17.58	18:50:00	20.57
	3:00:00	17.55	11:00:00	17.91	19:00:00	20.57
	3:10:00	17.55	11:10:00	18.63	19:10:00	20.55
	3:20:00	17.55	11:20:00	18.31	19:20:00	20.44
	3:30:00	17.55	11:30:00	18.39	19:30:00	20.35
	3:40:00	17.61	11:40:00	18.47	19:40:00	20.24
	3:50:00	17.53	11:50:00	18.54	19:50:00	20.25
	4:00:00	17.54	12:00:00	18.62	20:00:00	20.13
	4:10:00	17.48	12:10:00	18.71	20:10:00	20.11
	4:20:00	17.51	12:20:00	18.57	20:20:00	20
	4:30:00	17.47	12:30:00	19.03	20:30:00	19.91
	4:40:00	17.49	12:40:00	19.05	20:40:00	19.85
	4:50:00	17.47	12:50:00	19.81	20:50:00	19.8
	5:00:00	17.47	13:00:00	19.13	21:00:00	19.76
	5:10:00	17.44	13:10:00	19.17	21:10:00	19.72
	5:20:00	17.46	13:20:00	19.08	21:20:00	19.67
	5:30:00	17.43	13:30:00	18.21	21:30:00	19.58
	5:40:00	17.43	13:40:00	17.9	21:40:00	19.57
	5:50:00	17.44	13:50:00	18.34	21:50:00	19.53
	6:00:00	17.41	14:00:00	18.59	22:00:00	19.49
	6:10:00	17.41	14:10:00	18.71	22:10:00	19.39
	6:20:00	17.41	14:20:00	18.78	22:20:00	19.34
	6:30:00	17.37	14:30:00	18.84	22:30:00	19.34
	6:40:00	17.37	14:40:00	18.93	22:40:00	19.24
	6:50:00	17.37	14:50:00	18.98	22:50:00	19.21
	7:00:00	17.32	15:00:00	19.04	23:00:00	19.16
	7:10:00	17.31	15:10:00	19.04	23:10:00	19.09
	7:20:00	17.28	15:20:00	19.17	23:20:00	19.01
	7:30:00	17.24	15:30:00	19.15	23:30:00	18.93
	7:40:00	17.23	15:40:00	19.17	23:40:00	18.88
	7:50:00	17.19	15:50:00	19.32	23:50:00	18.8

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/16/2008	0:00:00	18.74	8:00:00	16.44	16:00:00	20.25
	0:10:00	18.7	8:10:00	16.42	16:10:00	20.08
	0:20:00	18.61	8:20:00	16.43	16:20:00	20.29
	0:30:00	18.58	8:30:00	16.37	16:30:00	20.33
	0:40:00	18.5	8:40:00	16.43	16:40:00	20.51
	0:50:00	18.44	8:50:00	16.45	16:50:00	20.47
	1:00:00	18.37	9:00:00	16.46	17:00:00	20.37
	1:10:00	18.27	9:10:00	16.58	17:10:00	20.57
	1:20:00	18.26	9:20:00	16.68	17:20:00	20.61
	1:30:00	18.22	9:30:00	16.76	17:30:00	20.72
	1:40:00	18.12	9:40:00	16.87	17:40:00	20.81
	1:50:00	18.06	9:50:00	17	17:50:00	20.92
	2:00:00	18.03	10:00:00	17.01	18:00:00	20.95
	2:10:00	17.98	10:10:00	17.48	18:10:00	21.03
	2:20:00	17.89	10:20:00	17.37	18:20:00	21.06
	2:30:00	17.88	10:30:00	17.5	18:30:00	21.11
	2:40:00	17.85	10:40:00	17.4	18:40:00	21.11
	2:50:00	17.71	10:50:00	17.74	18:50:00	21.03
	3:00:00	17.68	11:00:00	17.87	19:00:00	21.03
	3:10:00	17.64	11:10:00	18.03	19:10:00	20.96
	3:20:00	17.6	11:20:00	18.13	19:20:00	20.87
	3:30:00	17.59	11:30:00	18.19	19:30:00	20.81
	3:40:00	17.48	11:40:00	18.26	19:40:00	20.76
	3:50:00	17.44	11:50:00	18.44	19:50:00	20.74
	4:00:00	17.4	12:00:00	18.5	20:00:00	20.57
	4:10:00	17.37	12:10:00	18.54	20:10:00	20.41
	4:20:00	17.25	12:20:00	18.75	20:20:00	20.38
	4:30:00	17.28	12:30:00	18.68	20:30:00	20.29
	4:40:00	17.26	12:40:00	18.95	20:40:00	20.2
	4:50:00	17.13	12:50:00	19.28	20:50:00	20.06
	5:00:00	17.1	13:00:00	19.14	21:00:00	20
	5:10:00	17.05	13:10:00	19.27	21:10:00	19.91
	5:20:00	17	13:20:00	19.18	21:20:00	19.89
	5:30:00	17	13:30:00	18.35	21:30:00	19.8
	5:40:00	16.94	13:40:00	18.35	21:40:00	19.72
	5:50:00	16.91	13:50:00	18.83	21:50:00	19.67
	6:00:00	16.87	14:00:00	19.07	22:00:00	19.61
	6:10:00	16.77	14:10:00	19.33	22:10:00	19.52
	6:20:00	16.8	14:20:00	19.42	22:20:00	19.45
	6:30:00	16.69	14:30:00	19.51	22:30:00	19.39
6:40:00	16.67	14:40:00	19.6	22:40:00	19.32	
6:50:00	16.65	14:50:00	19.69	22:50:00	19.21	
7:00:00	16.6	15:00:00	19.74	23:00:00	19.17	
7:10:00	16.54	15:10:00	19.8	23:10:00	19.1	
7:20:00	16.52	15:20:00	19.89	23:20:00	19.01	
7:30:00	16.49	15:30:00	19.96	23:30:00	18.96	
7:40:00	16.46	15:40:00	20.04	23:40:00	18.9	
7:50:00	16.44	15:50:00	20.12	23:50:00	18.83	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/17/2008	0:00:00	18.77	8:00:00	16.12	16:00:00	23.29
	0:10:00	18.7	8:10:00	16.11	16:10:00	23.51
	0:20:00	18.62	8:20:00	16.12	16:20:00	23.72
	0:30:00	18.51	8:30:00	16.09	16:30:00	23.85
	0:40:00	18.44	8:40:00	16.09	16:40:00	23.9
	0:50:00	18.41	8:50:00	16.18	16:50:00	24.12
	1:00:00	18.32	9:00:00	16.2	17:00:00	24.08
	1:10:00	18.24	9:10:00	16.33	17:10:00	24.09
	1:20:00	18.21	9:20:00	16.44	17:20:00	24.17
	1:30:00	18.12	9:30:00	16.63	17:30:00	24.26
	1:40:00	18.05	9:40:00	16.67	17:40:00	24.18
	1:50:00	17.96	9:50:00	16.7	17:50:00	24.24
	2:00:00	17.81	10:00:00	17.02	18:00:00	24.17
	2:10:00	17.82	10:10:00	17.22	18:10:00	24.16
	2:20:00	17.77	10:20:00	17.28	18:20:00	24.16
	2:30:00	17.7	10:30:00	17.31	18:30:00	24.02
	2:40:00	17.64	10:40:00	17.43	18:40:00	23.9
	2:50:00	17.56	10:50:00	17.65	18:50:00	23.81
	3:00:00	17.5	11:00:00	17.85	19:00:00	23.71
	3:10:00	17.5	11:10:00	18.05	19:10:00	23.56
	3:20:00	17.43	11:20:00	18.25	19:20:00	23.43
	3:30:00	17.32	11:30:00	18.17	19:30:00	23.35
	3:40:00	17.3	11:40:00	18.93	19:40:00	23.21
	3:50:00	17.22	11:50:00	18.54	19:50:00	23.06
	4:00:00	17.15	12:00:00	18.74	20:00:00	22.88
	4:10:00	17.11	12:10:00	18.84	20:10:00	22.71
	4:20:00	17.08	12:20:00	19.04	20:20:00	22.57
	4:30:00	16.96	12:30:00	19.08	20:30:00	22.37
	4:40:00	16.92	12:40:00	19.36	20:40:00	22.23
	4:50:00	16.89	12:50:00	19.43	20:50:00	22.07
	5:00:00	16.78	13:00:00	19.4	21:00:00	21.9
	5:10:00	16.8	13:10:00	19.77	21:10:00	21.77
	5:20:00	16.73	13:20:00	20.03	21:20:00	21.65
	5:30:00	16.68	13:30:00	20.29	21:30:00	21.46
	5:40:00	16.65	13:40:00	20.49	21:40:00	21.35
	5:50:00	16.57	13:50:00	20.63	21:50:00	21.22
	6:00:00	16.51	14:00:00	20.79	22:00:00	21.05
	6:10:00	16.48	14:10:00	20.85	22:10:00	20.96
	6:20:00	16.47	14:20:00	21.07	22:20:00	20.83
	6:30:00	16.39	14:30:00	21.32	22:30:00	20.7
	6:40:00	16.36	14:40:00	21.51	22:40:00	20.53
	6:50:00	16.35	14:50:00	21.72	22:50:00	20.45
	7:00:00	16.32	15:00:00	22.05	23:00:00	20.34
	7:10:00	16.24	15:10:00	22.17	23:10:00	20.22
	7:20:00	16.21	15:20:00	22.39	23:20:00	20.06
	7:30:00	16.19	15:30:00	22.72	23:30:00	19.98
	7:40:00	16.16	15:40:00	22.87	23:40:00	19.85
	7:50:00	16.11	15:50:00	23.11	23:50:00	19.74

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/18/2008	0:00:00	19.62	8:00:00	16.21	16:00:00	20.74
	0:10:00	19.52	8:10:00	16.21	16:10:00	20.88
	0:20:00	19.42	8:20:00	16.25	16:20:00	20.88
	0:30:00	19.3	8:30:00	16.19	16:30:00	20.99
	0:40:00	19.21	8:40:00	16.21	16:40:00	20.98
	0:50:00	19.06	8:50:00	16.27	16:50:00	21.04
	1:00:00	18.97	9:00:00	16.36	17:00:00	20.99
	1:10:00	18.9	9:10:00	16.42	17:10:00	20.93
	1:20:00	18.81	9:20:00	16.59	17:20:00	20.62
	1:30:00	18.7	9:30:00	16.7	17:30:00	20.08
	1:40:00	18.56	9:40:00	16.8	17:40:00	19.88
	1:50:00	18.5	9:50:00	16.93	17:50:00	19.88
	2:00:00	18.44	10:00:00	17.07	18:00:00	19.77
	2:10:00	18.34	10:10:00	17.23	18:10:00	19.74
	2:20:00	18.24	10:20:00	17.35	18:20:00	19.62
	2:30:00	18.14	10:30:00	17.83	18:30:00	19.46
	2:40:00	18.07	10:40:00	17.67	18:40:00	19.34
	2:50:00	18	10:50:00	17.84	18:50:00	19.16
	3:00:00	17.92	11:00:00	18	19:00:00	19.12
	3:10:00	17.82	11:10:00	18.17	19:10:00	18.96
	3:20:00	17.73	11:20:00	18.29	19:20:00	18.89
	3:30:00	17.71	11:30:00	18.48	19:30:00	18.75
	3:40:00	17.61	11:40:00	19.07	19:40:00	18.6
	3:50:00	17.53	11:50:00	18.76	19:50:00	18.45
	4:00:00	17.5	12:00:00	19.06	20:00:00	18.41
	4:10:00	17.43	12:10:00	19.27	20:10:00	18.34
	4:20:00	17.34	12:20:00	19.46	20:20:00	18.32
	4:30:00	17.27	12:30:00	19.64	20:30:00	18.34
	4:40:00	17.22	12:40:00	19.88	20:40:00	18.27
	4:50:00	17.13	12:50:00	20.12	20:50:00	18.23
	5:00:00	17.1	13:00:00	20.47	21:00:00	18.21
	5:10:00	17.05	13:10:00	20.26	21:10:00	18.08
	5:20:00	17	13:20:00	20.46	21:20:00	17.97
	5:30:00	16.93	13:30:00	20.28	21:30:00	17.9
	5:40:00	16.9	13:40:00	19.55	21:40:00	17.86
	5:50:00	16.78	13:50:00	18.82	21:50:00	17.82
	6:00:00	16.75	14:00:00	19.33	22:00:00	17.77
	6:10:00	16.68	14:10:00	19.64	22:10:00	17.82
	6:20:00	16.64	14:20:00	19.76	22:20:00	17.75
	6:30:00	16.57	14:30:00	19.89	22:30:00	17.71
6:40:00	16.55	14:40:00	20.02	22:40:00	17.73	
6:50:00	16.49	14:50:00	20.16	22:50:00	17.73	
7:00:00	16.45	15:00:00	20.32	23:00:00	17.66	
7:10:00	16.37	15:10:00	20.4	23:10:00	17.7	
7:20:00	16.32	15:20:00	20.44	23:20:00	17.62	
7:30:00	16.3	15:30:00	20.46	23:30:00	17.6	
7:40:00	16.23	15:40:00	20.57	23:40:00	17.58	
7:50:00	16.21	15:50:00	20.75	23:50:00	17.55	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/19/2008	0:00:00	17.49	8:00:00	16.44	16:00:00	20.31
	0:10:00	17.44	8:10:00	16.44	16:10:00	20.02
	0:20:00	17.42	8:20:00	16.52	16:20:00	19.98
	0:30:00	17.38	8:30:00	16.44	16:30:00	19.96
	0:40:00	17.38	8:40:00	16.59	16:40:00	19.99
	0:50:00	17.31	8:50:00	16.63	16:50:00	20.08
	1:00:00	17.27	9:00:00	16.73	17:00:00	19.92
	1:10:00	17.2	9:10:00	16.81	17:10:00	19.67
	1:20:00	17.18	9:20:00	17	17:20:00	19.38
	1:30:00	17.14	9:30:00	17.04	17:30:00	19.24
	1:40:00	17.07	9:40:00	17.03	17:40:00	19.26
	1:50:00	17.01	9:50:00	17.42	17:50:00	19.26
	2:00:00	17.01	10:00:00	17.65	18:00:00	19.1
	2:10:00	16.95	10:10:00	17.83	18:10:00	18.99
	2:20:00	16.88	10:20:00	17.92	18:20:00	19.06
	2:30:00	16.87	10:30:00	18	18:30:00	19.12
	2:40:00	16.79	10:40:00	18.29	18:40:00	19.09
	2:50:00	16.82	10:50:00	18.5	18:50:00	18.94
	3:00:00	16.76	11:00:00	18.68	19:00:00	18.74
	3:10:00	16.7	11:10:00	18.92	19:10:00	18.68
	3:20:00	16.68	11:20:00	18.94	19:20:00	18.6
	3:30:00	16.66	11:30:00	19.22	19:30:00	18.45
	3:40:00	16.64	11:40:00	19.46	19:40:00	18.34
	3:50:00	16.61	11:50:00	19.5	19:50:00	18.27
	4:00:00	16.57	12:00:00	19.6	20:00:00	18.24
	4:10:00	16.58	12:10:00	20.14	20:10:00	18.17
	4:20:00	16.53	12:20:00	20.31	20:20:00	18.17
	4:30:00	16.53	12:30:00	20.59	20:30:00	18.12
	4:40:00	16.53	12:40:00	20.51	20:40:00	18.08
	4:50:00	16.52	12:50:00	20.74	20:50:00	18.06
	5:00:00	16.53	13:00:00	21.03	21:00:00	18.11
	5:10:00	16.47	13:10:00	21.28	21:10:00	18.06
	5:20:00	16.47	13:20:00	21.5	21:20:00	18.01
	5:30:00	16.43	13:30:00	21.73	21:30:00	18.03
	5:40:00	16.44	13:40:00	21.81	21:40:00	17.99
	5:50:00	16.41	13:50:00	21.9	21:50:00	18.01
	6:00:00	16.41	14:00:00	22.06	22:00:00	18.03
	6:10:00	16.41	14:10:00	22.26	22:10:00	17.95
	6:20:00	16.34	14:20:00	22.37	22:20:00	17.97
	6:30:00	16.36	14:30:00	22.46	22:30:00	17.97
	6:40:00	16.29	14:40:00	22.52	22:40:00	17.97
	6:50:00	16.33	14:50:00	22.62	22:50:00	17.9
	7:00:00	16.33	15:00:00	22.71	23:00:00	17.88
	7:10:00	16.35	15:10:00	22.62	23:10:00	17.86
	7:20:00	16.35	15:20:00	23.07	23:20:00	17.87
	7:30:00	16.35	15:30:00	23.14	23:30:00	17.79
	7:40:00	16.41	15:40:00	22.49	23:40:00	17.76
	7:50:00	16.43	15:50:00	21.29	23:50:00	17.73



## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/20/2008	0:00:00	17.68	8:00:00	17.12	16:00:00	25.3
	0:10:00	17.64	8:10:00	17.15	16:10:00	25.55
	0:20:00	17.62	8:20:00	17.17	16:20:00	25.7
	0:30:00	17.62	8:30:00	17.2	16:30:00	25.9
	0:40:00	17.51	8:40:00	17.25	16:40:00	26.07
	0:50:00	17.6	8:50:00	17.31	16:50:00	26.13
	1:00:00	17.55	9:00:00	17.37	17:00:00	26.27
	1:10:00	17.51	9:10:00	17.51	17:10:00	26.63
	1:20:00	17.53	9:20:00	17.64	17:20:00	26.23
	1:30:00	17.51	9:30:00	17.73	17:30:00	25.24
	1:40:00	17.49	9:40:00	17.84	17:40:00	23.77
	1:50:00	17.47	9:50:00	17.76	17:50:00	22.52
	2:00:00	17.44	10:00:00	18.35	18:00:00	21.93
	2:10:00	17.42	10:10:00	18.61	18:10:00	21.67
	2:20:00	17.4	10:20:00	18.69	18:20:00	21.65
	2:30:00	17.38	10:30:00	18.78	18:30:00	21.58
	2:40:00	17.36	10:40:00	18.73	18:40:00	21.53
	2:50:00	17.36	10:50:00	18.86	18:50:00	21.41
	3:00:00	17.36	11:00:00	19.06	19:00:00	21.33
	3:10:00	17.31	11:10:00	19.2	19:10:00	21.2
	3:20:00	17.36	11:20:00	19.39	19:20:00	21.1
	3:30:00	17.38	11:30:00	19.54	19:30:00	21.04
	3:40:00	17.36	11:40:00	19.71	19:40:00	20.89
	3:50:00	17.37	11:50:00	20.31	19:50:00	20.74
	4:00:00	17.38	12:00:00	19.79	20:00:00	20.75
	4:10:00	17.36	12:10:00	20.25	20:10:00	20.62
	4:20:00	17.32	12:20:00	20.49	20:20:00	20.55
	4:30:00	17.35	12:30:00	20.67	20:30:00	20.48
	4:40:00	17.34	12:40:00	20.95	20:40:00	20.37
	4:50:00	17.31	12:50:00	21.18	20:50:00	20.28
5:00:00	17.34	13:00:00	21.42	21:00:00	20.22	
5:10:00	17.36	13:10:00	21.63	21:10:00	20.06	
5:20:00	17.36	13:20:00	21.95	21:20:00	20.06	
5:30:00	17.31	13:30:00	22.14	21:30:00	20.01	
5:40:00	17.29	13:40:00	22.37	21:40:00	19.91	
5:50:00	17.31	13:50:00	22.65	21:50:00	19.84	
6:00:00	17.29	14:00:00	22.85	22:00:00	19.76	
6:10:00	17.29	14:10:00	23.14	22:10:00	19.67	
6:20:00	17.25	14:20:00	23.32	22:20:00	19.61	
6:30:00	17.23	14:30:00	23.52	22:30:00	19.54	
6:40:00	17.26	14:40:00	23.78	22:40:00	19.5	
6:50:00	17.18	14:50:00	23.93	22:50:00	19.44	
7:00:00	17.24	15:00:00	24.21	23:00:00	19.41	
7:10:00	17.18	15:10:00	24.49	23:10:00	19.34	
7:20:00	17.14	15:20:00	24.66	23:20:00	19.3	
7:30:00	17.03	15:30:00	24.87	23:30:00	19.21	
7:40:00	17.15	15:40:00	25.01	23:40:00	19.17	
7:50:00	17.16	15:50:00	25.11	23:50:00	19.15	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/21/2008	0:00:00	19.12	8:00:00	17.56	16:00:00	23.9
	0:10:00	19.09	8:10:00	17.53	16:10:00	22.13
	0:20:00	19.02	8:20:00	17.56	16:20:00	21.78
	0:30:00	18.97	8:30:00	17.59	16:30:00	21.68
	0:40:00	18.97	8:40:00	17.6	16:40:00	21.64
	0:50:00	18.95	8:50:00	17.66	16:50:00	21.46
	1:00:00	18.91	9:00:00	17.73	17:00:00	21.47
	1:10:00	18.89	9:10:00	17.83	17:10:00	21.41
	1:20:00	18.85	9:20:00	17.79	17:20:00	21.32
	1:30:00	18.82	9:30:00	18.02	17:30:00	21.23
	1:40:00	18.78	9:40:00	18.03	17:40:00	21.19
	1:50:00	18.75	9:50:00	18.33	17:50:00	21.17
	2:00:00	18.77	10:00:00	18.46	18:00:00	21.07
	2:10:00	18.72	10:10:00	18.6	18:10:00	21
	2:20:00	18.68	10:20:00	18.71	18:20:00	20.87
	2:30:00	18.65	10:30:00	18.82	18:30:00	20.79
	2:40:00	18.58	10:40:00	18.92	18:40:00	20.68
	2:50:00	18.56	10:50:00	19.16	18:50:00	20.57
	3:00:00	18.53	11:00:00	19.32	19:00:00	20.47
	3:10:00	18.53	11:10:00	19.53	19:10:00	20.22
	3:20:00	18.48	11:20:00	19.73	19:20:00	20
	3:30:00	18.41	11:30:00	19.89	19:30:00	19.8
	3:40:00	18.41	11:40:00	20.13	19:40:00	19.67
	3:50:00	18.35	11:50:00	20.08	19:50:00	19.61
	4:00:00	18.34	12:00:00	20.5	20:00:00	19.52
	4:10:00	18.27	12:10:00	20.75	20:10:00	19.52
	4:20:00	18.26	12:20:00	20.93	20:20:00	19.48
	4:30:00	18.22	12:30:00	21.18	20:30:00	19.45
	4:40:00	18.12	12:40:00	21.38	20:40:00	19.48
	4:50:00	18.12	12:50:00	21.64	20:50:00	19.43
	5:00:00	18.08	13:00:00	21.92	21:00:00	19.37
	5:10:00	18.03	13:10:00	22.17	21:10:00	19.34
	5:20:00	18.01	13:20:00	22.37	21:20:00	19.34
	5:30:00	17.95	13:30:00	22.61	21:30:00	19.34
	5:40:00	17.95	13:40:00	22.85	21:40:00	19.28
	5:50:00	17.82	13:50:00	23.18	21:50:00	19.26
	6:00:00	17.89	14:00:00	23.38	22:00:00	19.21
	6:10:00	17.78	14:10:00	23.55	22:10:00	19.19
	6:20:00	17.79	14:20:00	23.89	22:20:00	19.15
	6:30:00	17.77	14:30:00	24.04	22:30:00	19.1
	6:40:00	17.71	14:40:00	24.3	22:40:00	19.08
	6:50:00	17.66	14:50:00	24.42	22:50:00	19.06
	7:00:00	17.67	15:00:00	24.63	23:00:00	19.06
	7:10:00	17.62	15:10:00	24.91	23:10:00	18.97
	7:20:00	17.62	15:20:00	25.1	23:20:00	18.99
	7:30:00	17.55	15:30:00	25.15	23:30:00	18.91
	7:40:00	17.55	15:40:00	25.56	23:40:00	18.92
	7:50:00	17.53	15:50:00	25.44	23:50:00	18.86

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/22/2008	0:00:00	18.88	8:00:00	17.94	16:00:00	21.9
	0:10:00	18.81	8:10:00	17.91	16:10:00	21.93
	0:20:00	18.78	8:20:00	17.95	16:20:00	21.94
	0:30:00	18.77	8:30:00	17.97	16:30:00	21.96
	0:40:00	18.75	8:40:00	18.01	16:40:00	22.05
	0:50:00	18.7	8:50:00	18.03	16:50:00	22.05
	1:00:00	18.63	9:00:00	18.1	17:00:00	21.96
	1:10:00	18.61	9:10:00	18.17	17:10:00	21.75
	1:20:00	18.58	9:20:00	18.32	17:20:00	21.48
	1:30:00	18.56	9:30:00	18.41	17:30:00	21.35
	1:40:00	18.54	9:40:00	18.37	17:40:00	21.18
	1:50:00	18.5	9:50:00	18.79	17:50:00	21.08
	2:00:00	18.48	10:00:00	18.98	18:00:00	20.99
	2:10:00	18.47	10:10:00	19.21	18:10:00	21.07
	2:20:00	18.45	10:20:00	19.39	18:20:00	21.1
	2:30:00	18.45	10:30:00	19.52	18:30:00	21.07
	2:40:00	18.43	10:40:00	19.67	18:40:00	21.03
	2:50:00	18.43	10:50:00	19.69	18:50:00	20.94
	3:00:00	18.43	11:00:00	19.8	19:00:00	20.91
	3:10:00	18.38	11:10:00	20	19:10:00	20.76
	3:20:00	18.38	11:20:00	20.2	19:20:00	20.72
	3:30:00	18.38	11:30:00	20.39	19:30:00	20.65
	3:40:00	18.34	11:40:00	20.52	19:40:00	20.57
	3:50:00	18.33	11:50:00	20.93	19:50:00	20.48
	4:00:00	18.25	12:00:00	21.17	20:00:00	20.41
	4:10:00	18.29	12:10:00	21.09	20:10:00	20.35
	4:20:00	18.27	12:20:00	21.1	20:20:00	20.25
	4:30:00	18.27	12:30:00	21.56	20:30:00	20.21
	4:40:00	18.25	12:40:00	21.65	20:40:00	20.08
	4:50:00	18.23	12:50:00	21.91	20:50:00	20.04
	5:00:00	18.19	13:00:00	21.78	21:00:00	19.96
	5:10:00	18.17	13:10:00	21.78	21:10:00	19.9
	5:20:00	18.19	13:20:00	21.39	21:20:00	19.82
	5:30:00	18.14	13:30:00	20.09	21:30:00	19.76
	5:40:00	18.12	13:40:00	19.96	21:40:00	19.69
	5:50:00	18.12	13:50:00	20.36	21:50:00	19.63
	6:00:00	18.08	14:00:00	20.57	22:00:00	19.56
	6:10:00	18.06	14:10:00	20.79	22:10:00	19.5
	6:20:00	18.05	14:20:00	20.97	22:20:00	19.41
	6:30:00	18.03	14:30:00	21.11	22:30:00	19.39
6:40:00	17.99	14:40:00	21.23	22:40:00	19.39	
6:50:00	17.97	14:50:00	21.34	22:50:00	19.3	
7:00:00	17.97	15:00:00	21.44	23:00:00	19.26	
7:10:00	17.92	15:10:00	21.52	23:10:00	19.19	
7:20:00	17.92	15:20:00	21.59	23:20:00	19.17	
7:30:00	17.91	15:30:00	21.69	23:30:00	19.08	
7:40:00	17.89	15:40:00	21.7	23:40:00	19.08	
7:50:00	17.87	15:50:00	21.77	23:50:00	19.04	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/23/2008	0:00:00	19.02	8:00:00	17.49	16:00:00	21.91
	0:10:00	19.01	8:10:00	17.52	16:10:00	22.07
	0:20:00	18.93	8:20:00	17.52	16:20:00	22.1
	0:30:00	18.92	8:30:00	17.51	16:30:00	22.13
	0:40:00	18.86	8:40:00	17.56	16:40:00	22.33
	0:50:00	18.86	8:50:00	17.63	16:50:00	22.42
	1:00:00	18.83	9:00:00	17.73	17:00:00	22.51
	1:10:00	18.8	9:10:00	17.84	17:10:00	22.63
	1:20:00	18.8	9:20:00	18	17:20:00	22.73
	1:30:00	18.75	9:30:00	18.11	17:30:00	22.72
	1:40:00	18.75	9:40:00	18.21	17:40:00	22.74
	1:50:00	18.71	9:50:00	18.22	17:50:00	22.81
	2:00:00	18.67	10:00:00	18.59	18:00:00	22.83
	2:10:00	18.69	10:10:00	18.83	18:10:00	22.76
	2:20:00	18.65	10:20:00	19.04	18:20:00	22.81
	2:30:00	18.6	10:30:00	19.04	18:30:00	22.86
	2:40:00	18.58	10:40:00	19.14	18:40:00	22.85
	2:50:00	18.51	10:50:00	19.42	18:50:00	22.78
	3:00:00	18.51	11:00:00	19.57	19:00:00	22.68
	3:10:00	18.5	11:10:00	19.75	19:10:00	22.62
	3:20:00	18.47	11:20:00	19.97	19:20:00	22.55
	3:30:00	18.44	11:30:00	20.13	19:30:00	22.52
	3:40:00	18.36	11:40:00	20.37	19:40:00	22.42
	3:50:00	18.36	11:50:00	20.58	19:50:00	22.37
	4:00:00	18.25	12:00:00	20.7	20:00:00	22.27
	4:10:00	18.3	12:10:00	20.78	20:10:00	22.2
	4:20:00	18.25	12:20:00	20.94	20:20:00	22.07
	4:30:00	18.19	12:30:00	21.33	20:30:00	21.96
	4:40:00	18.14	12:40:00	21.64	20:40:00	21.88
	4:50:00	18.13	12:50:00	21.86	20:50:00	21.77
	5:00:00	18.09	13:00:00	22.04	21:00:00	21.72
	5:10:00	18.05	13:10:00	21.82	21:10:00	21.62
	5:20:00	18.01	13:20:00	21.74	21:20:00	21.55
	5:30:00	17.97	13:30:00	21.3	21:30:00	21.48
	5:40:00	17.94	13:40:00	20.05	21:40:00	21.33
	5:50:00	17.9	13:50:00	19.99	21:50:00	21.24
	6:00:00	17.82	14:00:00	20.38	22:00:00	21.22
	6:10:00	17.82	14:10:00	20.64	22:10:00	21.11
	6:20:00	17.77	14:20:00	20.86	22:20:00	21.07
	6:30:00	17.71	14:30:00	20.95	22:30:00	21
	6:40:00	17.68	14:40:00	21.13	22:40:00	20.94
	6:50:00	17.65	14:50:00	21.24	22:50:00	20.85
	7:00:00	17.6	15:00:00	21.38	23:00:00	20.81
	7:10:00	17.58	15:10:00	21.41	23:10:00	20.74
	7:20:00	17.59	15:20:00	21.47	23:20:00	20.68
	7:30:00	17.52	15:30:00	21.61	23:30:00	20.63
	7:40:00	17.53	15:40:00	21.72	23:40:00	20.57
	7:50:00	17.51	15:50:00	21.78	23:50:00	20.55

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/24/2008	0:00:00	20.5	8:00:00	17.98	16:00:00	22.19
	0:10:00	20.44	8:10:00	17.92	16:10:00	22.26
	0:20:00	20.4	8:20:00	17.95	16:20:00	22.26
	0:30:00	20.37	8:30:00	17.92	16:30:00	22.5
	0:40:00	20.29	8:40:00	17.88	16:40:00	22.52
	0:50:00	20.28	8:50:00	17.97	16:50:00	22.72
	1:00:00	20.24	9:00:00	18.01	17:00:00	22.85
	1:10:00	20.2	9:10:00	18.12	17:10:00	23
	1:20:00	20.13	9:20:00	18.25	17:20:00	23.07
	1:30:00	20.04	9:30:00	18.36	17:30:00	23.24
	1:40:00	20.04	9:40:00	18.49	17:40:00	23.3
	1:50:00	20.02	9:50:00	18.5	17:50:00	23.3
	2:00:00	19.96	10:00:00	18.91	18:00:00	23.41
	2:10:00	19.87	10:10:00	19.08	18:10:00	23.45
	2:20:00	19.87	10:20:00	19.19	18:20:00	23.45
	2:30:00	19.82	10:30:00	19.24	18:30:00	23.54
	2:40:00	19.76	10:40:00	19.41	18:40:00	23.54
	2:50:00	19.69	10:50:00	19.54	18:50:00	23.49
	3:00:00	19.63	11:00:00	19.71	19:00:00	23.48
	3:10:00	19.58	11:10:00	19.85	19:10:00	23.44
	3:20:00	19.54	11:20:00	20.13	19:20:00	23.44
	3:30:00	19.45	11:30:00	20.46	19:30:00	23.34
	3:40:00	19.39	11:40:00	20.46	19:40:00	23.27
	3:50:00	19.37	11:50:00	20.48	19:50:00	23.24
	4:00:00	19.3	12:00:00	20.71	20:00:00	23.18
	4:10:00	19.24	12:10:00	20.8	20:10:00	23.08
	4:20:00	19.15	12:20:00	20.93	20:20:00	22.97
	4:30:00	19.14	12:30:00	20.98	20:30:00	22.88
	4:40:00	19.05	12:40:00	21.17	20:40:00	22.78
	4:50:00	18.96	12:50:00	21.43	20:50:00	22.66
	5:00:00	18.94	13:00:00	21.52	21:00:00	22.54
	5:10:00	18.84	13:10:00	21.34	21:10:00	22.45
	5:20:00	18.83	13:20:00	21.39	21:20:00	22.35
	5:30:00	18.7	13:30:00	20.47	21:30:00	22.24
	5:40:00	18.68	13:40:00	19.63	21:40:00	22.15
	5:50:00	18.62	13:50:00	19.97	21:50:00	22.07
	6:00:00	18.56	14:00:00	20.25	22:00:00	22
	6:10:00	18.48	14:10:00	20.47	22:10:00	21.9
	6:20:00	18.41	14:20:00	20.6	22:20:00	21.83
	6:30:00	18.32	14:30:00	20.76	22:30:00	21.78
	6:40:00	18.3	14:40:00	20.83	22:40:00	21.7
	6:50:00	18.29	14:50:00	21.05	22:50:00	21.66
	7:00:00	18.22	15:00:00	21.17	23:00:00	21.57
	7:10:00	18.15	15:10:00	21.38	23:10:00	21.55
	7:20:00	18.12	15:20:00	21.5	23:20:00	21.46
	7:30:00	18.07	15:30:00	21.66	23:30:00	21.45
	7:40:00	17.99	15:40:00	21.83	23:40:00	21.39
	7:50:00	18	15:50:00	22.03	23:50:00	21.31

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/25/2008	0:00:00	21.28	8:00:00	19.02	16:00:00	20.68
	0:10:00	21.22	8:10:00	19.08	16:10:00	20.7
	0:20:00	21.18	8:20:00	19.06	16:20:00	20.75
	0:30:00	21.13	8:30:00	19.08	16:30:00	20.93
	0:40:00	21.09	8:40:00	19.06	16:40:00	20.99
	0:50:00	21.03	8:50:00	19.1	16:50:00	21.1
	1:00:00	21	9:00:00	19.1	17:00:00	21.13
	1:10:00	20.97	9:10:00	19.13	17:10:00	21.26
	1:20:00	20.89	9:20:00	19.17	17:20:00	21.33
	1:30:00	20.85	9:30:00	19.24	17:30:00	21.35
	1:40:00	20.79	9:40:00	19.28	17:40:00	21.47
	1:50:00	20.79	9:50:00	19.32	17:50:00	21.42
	2:00:00	20.7	10:00:00	19.38	18:00:00	21.44
	2:10:00	20.65	10:10:00	19.38	18:10:00	21.44
	2:20:00	20.62	10:20:00	19.55	18:20:00	21.42
	2:30:00	20.57	10:30:00	19.35	18:30:00	21.41
	2:40:00	20.51	10:40:00	19.55	18:40:00	21.42
	2:50:00	20.48	10:50:00	19.86	18:50:00	21.32
	3:00:00	20.39	11:00:00	19.96	19:00:00	21.38
	3:10:00	20.37	11:10:00	20.09	19:10:00	21.32
	3:20:00	20.31	11:20:00	20.26	19:20:00	21.31
	3:30:00	20.26	11:30:00	20.37	19:30:00	21.23
	3:40:00	20.2	11:40:00	20.45	19:40:00	21.23
	3:50:00	20.15	11:50:00	21.08	19:50:00	21.21
	4:00:00	20.11	12:00:00	20.69	20:00:00	21.13
	4:10:00	20.06	12:10:00	20.87	20:10:00	21.05
	4:20:00	20.04	12:20:00	21.07	20:20:00	21
	4:30:00	19.93	12:30:00	21.13	20:30:00	20.95
	4:40:00	19.91	12:40:00	21.2	20:40:00	20.83
	4:50:00	19.82	12:50:00	21.21	20:50:00	20.84
	5:00:00	19.78	13:00:00	21.21	21:00:00	20.74
	5:10:00	19.76	13:10:00	21.12	21:10:00	20.65
	5:20:00	19.69	13:20:00	20.85	21:20:00	20.62
	5:30:00	19.56	13:30:00	19.78	21:30:00	20.57
	5:40:00	19.65	13:40:00	18.99	21:40:00	20.5
	5:50:00	19.58	13:50:00	19.24	21:50:00	20.41
	6:00:00	19.52	14:00:00	19.43	22:00:00	20.37
	6:10:00	19.45	14:10:00	19.58	22:10:00	20.36
	6:20:00	19.43	14:20:00	19.73	22:20:00	20.29
	6:30:00	19.34	14:30:00	19.92	22:30:00	20.24
	6:40:00	19.32	14:40:00	19.93	22:40:00	20.22
	6:50:00	19.32	14:50:00	20.01	22:50:00	20.16
	7:00:00	19.26	15:00:00	20.2	23:00:00	20.11
	7:10:00	19.17	15:10:00	20.27	23:10:00	20.04
	7:20:00	19.17	15:20:00	20.26	23:20:00	20.05
	7:30:00	19.17	15:30:00	20.25	23:30:00	19.95
	7:40:00	19.13	15:40:00	20.46	23:40:00	19.97
	7:50:00	19.14	15:50:00	20.61	23:50:00	19.88



## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/26/2008	0:00:00	19.84	8:00:00	17.51	16:00:00	23.32
	0:10:00	19.78	8:10:00	17.49	16:10:00	23.41
	0:20:00	19.73	8:20:00	17.56	16:20:00	23.44
	0:30:00	19.69	8:30:00	17.54	16:30:00	23.49
	0:40:00	19.64	8:40:00	17.54	16:40:00	23.54
	0:50:00	19.55	8:50:00	17.5	16:50:00	23.6
	1:00:00	19.53	9:00:00	17.34	17:00:00	23.59
	1:10:00	19.48	9:10:00	17.51	17:10:00	23.64
	1:20:00	19.43	9:20:00	17.71	17:20:00	23.67
	1:30:00	19.34	9:30:00	17.76	17:30:00	23.62
	1:40:00	19.33	9:40:00	17.74	17:40:00	23.65
	1:50:00	19.27	9:50:00	17.73	17:50:00	23.56
	2:00:00	19.19	10:00:00	17.83	18:00:00	23.56
	2:10:00	19.16	10:10:00	17.69	18:10:00	23.54
	2:20:00	19.13	10:20:00	18.02	18:20:00	23.56
	2:30:00	19.04	10:30:00	18.06	18:30:00	23.48
	2:40:00	19.06	10:40:00	17.91	18:40:00	23.41
	2:50:00	18.97	10:50:00	18.25	18:50:00	23.34
	3:00:00	18.92	11:00:00	18.11	19:00:00	23.33
	3:10:00	18.88	11:10:00	18.41	19:10:00	23.23
	3:20:00	18.78	11:20:00	18.59	19:20:00	23.08
	3:30:00	18.78	11:30:00	18.68	19:30:00	23.03
	3:40:00	18.69	11:40:00	18.78	19:40:00	22.97
	3:50:00	18.62	11:50:00	18.7	19:50:00	22.93
	4:00:00	18.58	12:00:00	19.64	20:00:00	22.82
	4:10:00	18.55	12:10:00	19.37	20:10:00	22.69
	4:20:00	18.45	12:20:00	19.31	20:20:00	22.6
	4:30:00	18.44	12:30:00	19.7	20:30:00	22.49
	4:40:00	18.39	12:40:00	19.99	20:40:00	22.42
	4:50:00	18.34	12:50:00	20.08	20:50:00	22.34
	5:00:00	18.27	13:00:00	20.38	21:00:00	22.27
	5:10:00	18.3	13:10:00	20.55	21:10:00	22.16
	5:20:00	18.22	13:20:00	20.81	21:20:00	22.07
	5:30:00	18.18	13:30:00	20.93	21:30:00	22
	5:40:00	18.13	13:40:00	21.15	21:40:00	21.86
	5:50:00	18.07	13:50:00	21.36	21:50:00	21.79
	6:00:00	18.06	14:00:00	21.56	22:00:00	21.7
	6:10:00	18.02	14:10:00	21.76	22:10:00	21.64
	6:20:00	17.91	14:20:00	21.95	22:20:00	21.55
	6:30:00	17.94	14:30:00	22.11	22:30:00	21.42
	6:40:00	17.84	14:40:00	22.26	22:40:00	21.33
	6:50:00	17.82	14:50:00	22.39	22:50:00	21.27
	7:00:00	17.73	15:00:00	22.57	23:00:00	21.16
	7:10:00	17.71	15:10:00	22.7	23:10:00	21.13
	7:20:00	17.68	15:20:00	22.82	23:20:00	21.03
	7:30:00	17.62	15:30:00	22.93	23:30:00	20.96
	7:40:00	17.58	15:40:00	23.08	23:40:00	20.83
	7:50:00	17.55	15:50:00	23.19	23:50:00	20.79

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/27/2008	0:00:00	20.7	8:00:00	18.11	16:00:00	19.43
	0:10:00	20.63	8:10:00	18.11	16:10:00	19.41
	0:20:00	20.57	8:20:00	18.09	16:20:00	19.41
	0:30:00	20.5	8:30:00	18	16:30:00	19.39
	0:40:00	20.44	8:40:00	17.97	16:40:00	19.39
	0:50:00	20.33	8:50:00	17.97	16:50:00	19.39
	1:00:00	20.2	9:00:00	17.99	17:00:00	19.32
	1:10:00	20.17	9:10:00	17.98	17:10:00	19.3
	1:20:00	20.11	9:20:00	17.97	17:20:00	19.32
	1:30:00	20.02	9:30:00	17.99	17:30:00	19.26
	1:40:00	19.96	9:40:00	18.03	17:40:00	19.26
	1:50:00	19.87	9:50:00	18.06	17:50:00	19.19
	2:00:00	19.78	10:00:00	18.1	18:00:00	19.17
	2:10:00	19.69	10:10:00	18.17	18:10:00	19.1
	2:20:00	19.64	10:20:00	18.12	18:20:00	19.1
	2:30:00	19.57	10:30:00	18.12	18:30:00	19.08
	2:40:00	19.54	10:40:00	18.12	18:40:00	19.06
	2:50:00	19.45	10:50:00	18.12	18:50:00	18.97
	3:00:00	19.37	11:00:00	18.2	19:00:00	18.97
	3:10:00	19.3	11:10:00	18.26	19:10:00	18.93
	3:20:00	19.28	11:20:00	18.29	19:20:00	18.84
	3:30:00	19.19	11:30:00	18.36	19:30:00	18.84
	3:40:00	19.13	11:40:00	18.41	19:40:00	18.75
	3:50:00	19.1	11:50:00	18.38	19:50:00	18.71
	4:00:00	19.04	12:00:00	18.43	20:00:00	18.67
	4:10:00	18.99	12:10:00	18.41	20:10:00	18.6
	4:20:00	18.93	12:20:00	18.47	20:20:00	18.58
	4:30:00	18.89	12:30:00	18.5	20:30:00	18.54
	4:40:00	18.82	12:40:00	18.49	20:40:00	18.49
	4:50:00	18.75	12:50:00	18.58	20:50:00	18.45
	5:00:00	18.71	13:00:00	18.6	21:00:00	18.41
	5:10:00	18.71	13:10:00	18.69	21:10:00	18.36
	5:20:00	18.62	13:20:00	18.78	21:20:00	18.37
	5:30:00	18.6	13:30:00	18.85	21:30:00	18.3
	5:40:00	18.56	13:40:00	18.88	21:40:00	18.17
	5:50:00	18.53	13:50:00	18.85	21:50:00	18.19
	6:00:00	18.46	14:00:00	18.93	22:00:00	18.15
	6:10:00	18.44	14:10:00	19.02	22:10:00	18.08
	6:20:00	18.44	14:20:00	18.99	22:20:00	18
	6:30:00	18.35	14:30:00	19.08	22:30:00	18.01
	6:40:00	18.32	14:40:00	19.17	22:40:00	17.95
	6:50:00	18.31	14:50:00	19.22	22:50:00	17.96
	7:00:00	18.29	15:00:00	19.26	23:00:00	17.91
	7:10:00	18.27	15:10:00	19.3	23:10:00	17.87
	7:20:00	18.2	15:20:00	19.33	23:20:00	17.81
	7:30:00	18.2	15:30:00	19.37	23:30:00	17.78
	7:40:00	18.12	15:40:00	19.37	23:40:00	17.73
	7:50:00	18.14	15:50:00	19.39	23:50:00	17.64



## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/28/2008	0:00:00	17.64	8:00:00	16.64	16:00:00	18.94
	0:10:00	17.58	8:10:00	16.67	16:10:00	18.97
	0:20:00	17.58	8:20:00	16.69	16:20:00	18.95
	0:30:00	17.52	8:30:00	16.67	16:30:00	18.89
	0:40:00	17.49	8:40:00	16.7	16:40:00	18.83
	0:50:00	17.49	8:50:00	16.71	16:50:00	18.58
	1:00:00	17.43	9:00:00	16.68	17:00:00	18.17
	1:10:00	17.38	9:10:00	16.72	17:10:00	17.31
	1:20:00	17.36	9:20:00	16.72	17:20:00	17.73
	1:30:00	17.35	9:30:00	16.78	17:30:00	18.36
	1:40:00	17.29	9:40:00	16.83	17:40:00	18.8
	1:50:00	17.24	9:50:00	16.84	17:50:00	19.08
	2:00:00	17.22	10:00:00	16.81	18:00:00	19.3
	2:10:00	17.14	10:10:00	16.92	18:10:00	19.43
	2:20:00	17.14	10:20:00	16.93	18:20:00	19.54
	2:30:00	17.12	10:30:00	17	18:30:00	19.56
	2:40:00	17.07	10:40:00	17.01	18:40:00	19.65
	2:50:00	17.07	10:50:00	17.01	18:50:00	19.67
	3:00:00	17.05	11:00:00	17.07	19:00:00	19.63
	3:10:00	17.02	11:10:00	17.18	19:10:00	19.67
	3:20:00	17.01	11:20:00	17.2	19:20:00	19.67
	3:30:00	17.01	11:30:00	17.17	19:30:00	19.65
	3:40:00	16.94	11:40:00	17.03	19:40:00	19.63
	3:50:00	16.92	11:50:00	17.32	19:50:00	19.63
	4:00:00	16.88	12:00:00	17.39	20:00:00	19.58
	4:10:00	16.86	12:10:00	17.43	20:10:00	19.56
	4:20:00	16.86	12:20:00	17.43	20:20:00	19.54
	4:30:00	16.83	12:30:00	17.51	20:30:00	19.5
	4:40:00	16.81	12:40:00	17.62	20:40:00	19.48
	4:50:00	16.81	12:50:00	18.12	20:50:00	19.5
	5:00:00	16.83	13:00:00	17.93	21:00:00	19.43
	5:10:00	16.78	13:10:00	17.98	21:10:00	19.43
	5:20:00	16.78	13:20:00	18.09	21:20:00	19.42
	5:30:00	16.76	13:30:00	18.15	21:30:00	19.44
	5:40:00	16.73	13:40:00	18.2	21:40:00	19.41
	5:50:00	16.76	13:50:00	18.29	21:50:00	19.37
	6:00:00	16.73	14:00:00	18.37	22:00:00	19.32
	6:10:00	16.66	14:10:00	18.42	22:10:00	19.36
	6:20:00	16.67	14:20:00	18.53	22:20:00	19.36
	6:30:00	16.61	14:30:00	18.59	22:30:00	19.32
	6:40:00	16.64	14:40:00	18.66	22:40:00	19.28
	6:50:00	16.64	14:50:00	18.69	22:50:00	19.24
	7:00:00	16.66	15:00:00	18.75	23:00:00	19.28
	7:10:00	16.61	15:10:00	18.78	23:10:00	19.25
	7:20:00	16.63	15:20:00	18.82	23:20:00	19.2
	7:30:00	16.64	15:30:00	18.86	23:30:00	19.14
	7:40:00	16.66	15:40:00	18.93	23:40:00	19.14
	7:50:00	16.66	15:50:00	18.93	23:50:00	19.07

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/29/2008	0:00:00	19.05	8:00:00	18.23	16:00:00	21.71
	0:10:00	19.01	8:10:00	18.19	16:10:00	21.7
	0:20:00	18.98	8:20:00	18.22	16:20:00	21.75
	0:30:00	18.93	8:30:00	18.29	16:30:00	21.83
	0:40:00	18.91	8:40:00	18.31	16:40:00	22.05
	0:50:00	18.86	8:50:00	18.37	16:50:00	22.05
	1:00:00	18.88	9:00:00	18.35	17:00:00	22.19
	1:10:00	18.78	9:10:00	18.41	17:10:00	22.19
	1:20:00	18.82	9:20:00	18.38	17:20:00	22.24
	1:30:00	18.72	9:30:00	18.41	17:30:00	22.35
	1:40:00	18.75	9:40:00	18.44	17:40:00	22.31
	1:50:00	18.67	9:50:00	18.45	17:50:00	22.37
	2:00:00	18.67	10:00:00	18.48	18:00:00	22.31
	2:10:00	18.66	10:10:00	18.47	18:10:00	22.36
	2:20:00	18.6	10:20:00	18.54	18:20:00	22.36
	2:30:00	18.6	10:30:00	18.6	18:30:00	22.34
	2:40:00	18.6	10:40:00	18.6	18:40:00	22.29
	2:50:00	18.56	10:50:00	18.67	18:50:00	22.23
	3:00:00	18.53	11:00:00	18.75	19:00:00	22.23
	3:10:00	18.53	11:10:00	18.55	19:10:00	22.14
	3:20:00	18.54	11:20:00	19.53	19:20:00	22.03
	3:30:00	18.5	11:30:00	19.14	19:30:00	22.01
	3:40:00	18.49	11:40:00	19.31	19:40:00	21.86
	3:50:00	18.48	11:50:00	20	19:50:00	21.79
	4:00:00	18.43	12:00:00	19.55	20:00:00	21.75
	4:10:00	18.45	12:10:00	19.61	20:10:00	21.66
	4:20:00	18.43	12:20:00	20.11	20:20:00	21.56
	4:30:00	18.45	12:30:00	20.24	20:30:00	21.55
	4:40:00	18.41	12:40:00	20.51	20:40:00	21.53
	4:50:00	18.43	12:50:00	20.75	20:50:00	21.46
	5:00:00	18.42	13:00:00	20.84	21:00:00	21.39
	5:10:00	18.39	13:10:00	20.64	21:10:00	21.31
	5:20:00	18.39	13:20:00	20.26	21:20:00	21.27
	5:30:00	18.36	13:30:00	19.42	21:30:00	21.24
	5:40:00	18.3	13:40:00	19.19	21:40:00	21.19
	5:50:00	18.38	13:50:00	19.87	21:50:00	21.09
	6:00:00	18.34	14:00:00	20.24	22:00:00	21.03
	6:10:00	18.36	14:10:00	20.55	22:10:00	20.98
	6:20:00	18.32	14:20:00	20.85	22:20:00	20.92
	6:30:00	18.34	14:30:00	21.11	22:30:00	20.85
	6:40:00	18.32	14:40:00	21.2	22:40:00	20.79
	6:50:00	18.26	14:50:00	21.27	22:50:00	20.75
	7:00:00	18.25	15:00:00	21.24	23:00:00	20.69
	7:10:00	18.26	15:10:00	21.2	23:10:00	20.63
	7:20:00	18.27	15:20:00	21.28	23:20:00	20.55
	7:30:00	18.25	15:30:00	21.46	23:30:00	20.51
	7:40:00	18.21	15:40:00	21.52	23:40:00	20.44
	7:50:00	18.21	15:50:00	21.63	23:50:00	20.44

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/30/2008	0:00:00	20.34	8:00:00	18.53	16:00:00	19.99
	0:10:00	20.27	8:10:00	18.53	16:10:00	20.06
	0:20:00	20.21	8:20:00	18.55	16:20:00	20.1
	0:30:00	20.15	8:30:00	18.51	16:30:00	20.13
	0:40:00	20.11	8:40:00	18.59	16:40:00	20.22
	0:50:00	20.04	8:50:00	18.58	16:50:00	20.28
	1:00:00	19.96	9:00:00	18.6	17:00:00	20.41
	1:10:00	19.92	9:10:00	18.56	17:10:00	20.48
	1:20:00	19.85	9:20:00	18.57	17:20:00	20.58
	1:30:00	19.8	9:30:00	18.58	17:30:00	20.68
	1:40:00	19.72	9:40:00	18.63	17:40:00	20.63
	1:50:00	19.71	9:50:00	18.63	17:50:00	20.7
	2:00:00	19.61	10:00:00	18.61	18:00:00	20.73
	2:10:00	19.58	10:10:00	18.63	18:10:00	20.78
	2:20:00	19.5	10:20:00	18.63	18:20:00	20.76
	2:30:00	19.43	10:30:00	18.58	18:30:00	20.76
	2:40:00	19.48	10:40:00	18.6	18:40:00	20.83
	2:50:00	19.37	10:50:00	18.65	18:50:00	20.79
	3:00:00	19.37	11:00:00	18.63	19:00:00	20.81
	3:10:00	19.3	11:10:00	18.63	19:10:00	20.79
	3:20:00	19.24	11:20:00	18.63	19:20:00	20.74
	3:30:00	19.2	11:30:00	18.43	19:30:00	20.72
	3:40:00	19.19	11:40:00	18.78	19:40:00	20.74
	3:50:00	19.18	11:50:00	18.73	19:50:00	20.68
	4:00:00	19.12	12:00:00	19.62	20:00:00	20.52
	4:10:00	19.14	12:10:00	19.44	20:10:00	20.55
	4:20:00	19.06	12:20:00	19.1	20:20:00	20.5
	4:30:00	19.06	12:30:00	19.17	20:30:00	20.46
	4:40:00	19.02	12:40:00	19.17	20:40:00	20.44
	4:50:00	18.99	12:50:00	19.03	20:50:00	20.41
	5:00:00	18.93	13:00:00	19.18	21:00:00	20.37
	5:10:00	18.94	13:10:00	18.7	21:10:00	20.35
	5:20:00	18.89	13:20:00	17.73	21:20:00	20.28
	5:30:00	18.86	13:30:00	18.17	21:30:00	20.31
	5:40:00	18.82	13:40:00	18.56	21:40:00	20.26
	5:50:00	18.8	13:50:00	18.86	21:50:00	20.27
	6:00:00	18.75	14:00:00	19.01	22:00:00	20.23
	6:10:00	18.75	14:10:00	19.15	22:10:00	20.2
	6:20:00	18.69	14:20:00	19.26	22:20:00	20.19
	6:30:00	18.67	14:30:00	19.39	22:30:00	20.2
6:40:00	18.62	14:40:00	19.49	22:40:00	20.15	
6:50:00	18.6	14:50:00	19.55	22:50:00	20.13	
7:00:00	18.59	15:00:00	19.61	23:00:00	20.13	
7:10:00	18.56	15:10:00	19.65	23:10:00	20.13	
7:20:00	18.53	15:20:00	19.69	23:20:00	20.09	
7:30:00	18.54	15:30:00	19.76	23:30:00	20.09	
7:40:00	18.55	15:40:00	19.76	23:40:00	20.04	
7:50:00	18.55	15:50:00	19.84	23:50:00	20	

## SANG RUN WATER TEMPERATURE MONITORING

DATE	TIME	WATER TEMP (°C)	TIME	WATER TEMP (°C)	TIME	WATER (°C)TEMP
8/31/2008	0:00:00	20.01	8:00:00	18.21	16:00:00	25.11
	0:10:00	19.95	8:10:00	18.22	16:10:00	25.27
	0:20:00	19.89	8:20:00	18.19	16:20:00	25.43
	0:30:00	19.9	8:30:00	18.26	16:30:00	25.48
	0:40:00	19.85	8:40:00	18.22	16:40:00	25.61
	0:50:00	19.82	8:50:00	18.22	16:50:00	25.68
	1:00:00	19.77	9:00:00	18.22	17:00:00	25.78
	1:10:00	19.77	9:10:00	18.29	17:10:00	26.09
	1:20:00	19.69	9:20:00	18.35	17:20:00	25.95
	1:30:00	19.74	9:30:00	18.41	17:30:00	24.76
	1:40:00	19.67	9:40:00	18.5	17:40:00	22.61
	1:50:00	19.63	9:50:00	18.54	17:50:00	21.3
	2:00:00	19.63	10:00:00	18.72	18:00:00	21.16
	2:10:00	19.54	10:10:00	18.71	18:10:00	20.99
	2:20:00	19.48	10:20:00	18.97	18:20:00	20.8
	2:30:00	19.48	10:30:00	19.2	18:30:00	20.55
	2:40:00	19.48	10:40:00	19.38	18:40:00	20.4
	2:50:00	19.38	10:50:00	19.54	18:50:00	20.23
	3:00:00	19.38	11:00:00	19.73	19:00:00	20.06
	3:10:00	19.34	11:10:00	19.88	19:10:00	20
	3:20:00	19.28	11:20:00	20.05	19:20:00	19.87
	3:30:00	19.24	11:30:00	20.21	19:30:00	19.82
	3:40:00	19.18	11:40:00	20.34	19:40:00	19.76
	3:50:00	19.13	11:50:00	20.56	19:50:00	19.69
	4:00:00	19.15	12:00:00	20.89	20:00:00	19.67
	4:10:00	19.1	12:10:00	20.92	20:10:00	19.6
	4:20:00	19.02	12:20:00	21	20:20:00	19.56
	4:30:00	18.95	12:30:00	21.27	20:30:00	19.53
	4:40:00	18.93	12:40:00	21.5	20:40:00	19.52
	4:50:00	18.91	12:50:00	21.69	20:50:00	19.43
	5:00:00	18.86	13:00:00	21.82	21:00:00	19.4
	5:10:00	18.82	13:10:00	22.09	21:10:00	19.33
	5:20:00	18.78	13:20:00	22.25	21:20:00	19.27
	5:30:00	18.73	13:30:00	22.38	21:30:00	19.22
	5:40:00	18.69	13:40:00	22.61	21:40:00	19.15
	5:50:00	18.65	13:50:00	22.81	21:50:00	19.1
	6:00:00	18.65	14:00:00	23	22:00:00	19.02
	6:10:00	18.56	14:10:00	23.25	22:10:00	18.97
	6:20:00	18.56	14:20:00	23.41	22:20:00	18.93
	6:30:00	18.5	14:30:00	23.52	22:30:00	18.84
6:40:00	18.42	14:40:00	23.69	22:40:00	18.8	
6:50:00	18.39	14:50:00	23.96	22:50:00	18.71	
7:00:00	18.41	15:00:00	24.12	23:00:00	18.69	
7:10:00	18.33	15:10:00	24.32	23:10:00	18.6	
7:20:00	18.33	15:20:00	24.59	23:20:00	18.51	
7:30:00	18.27	15:30:00	24.73	23:30:00	18.47	
7:40:00	18.3	15:40:00	24.87	23:40:00	18.43	
7:50:00	18.24	15:50:00	25	23:50:00	18.36	

**TEMPERATURE ENHANCEMENT PLAN**  
**SANG RUN TEMPERATURE EXCURSIONS**



**Summary of Temperature Excursions  
June 1, 2008 to August 31, 2008**

<b>Date</b>	<b>Duration</b>	<b>Max. Temp (°C)</b>	<b>Cause</b>	<b>Remarks</b>
<b>JUNE 2008</b>				
No temperature excursions occurred in June.				
<b>JULY 2008</b>				
7/15/08	1 hour 40 minutes	25.48	(1) Model uncertainty	The protocol was conducted, and did not require a release on this day.
7/16/08	1 hour 40 minutes	26.19	(1) Model uncertainty	The protocol was conducted, a release was made in accordance with the protocols from 12:30 - 14:30.
7/18/08	30 minutes	25.53	(1) Model uncertainty	The protocol was conducted, a release was made in accordance with the protocols from 11:00 - 13:00.
7/19/08	10 minutes	25.45	(1) Model uncertainty	The protocol was conducted, a release was made in accordance with the protocols from 11:00 - 13:00.
7/20/08	1 hour 10 minutes	26.22	(1) Model uncertainty	The protocol was conducted, a release was made in accordance with the protocols from 12:30 - 14:30.
7/22/08	3 hours 40 minutes	26.12	(1) Model uncertainty	The protocol was conducted, and did not require a release on this day.
7/27/08	2 hours 50 minutes	25.47	(1) Model uncertainty	The protocol was conducted, and did not require a release on this day.
7/29/08	2 hours 50 minutes	26.46	(1) Model uncertainty	The protocol was conducted, and did not require a release on this day.
<b>AUGUST 2008</b>				
8/20/08	1 hour 50 minutes	26.63	(1) Model uncertainty	The protocol was conducted; a release was made in accordance with the protocols from 15:00 - 16:00.
8/21/08	30 minutes	25.56	(1) Model uncertainty	The protocol was conducted; a release was made in accordance with the protocols from 14:00 - 15:00.
8/31/08	1 hour 20 minutes	26.09	(1) Model uncertainty	The protocol was conducted; a release was made in accordance with the protocols from 15:00 - 16:00.
<b>Category (1) completed established protocol; temperature exceeded 25°C.</b>				





**TEMPERATURE ENHANCEMENT PLAN RELEASE DATA TABLES**



<b>2008 DATES AND TIMES OF TEMPERATURE ENHANCEMENT PLAN RELEASES</b>			
<b>DATE</b>	<b>START TIME</b>	<b>STOP TIME</b>	<b>RIVER FLOW (CFS)</b>
July 16	1230	1900	78
July 17	1230	1500	68
July 19	1100	1400	50
July 20	1230	1430	45
August 20	1500	1600	27
August 21	1330	1800	26
August 23	1100	1400	20
August 24	1100	1300	19
August 31	1500	1800	32

<b>2008 COMBINED TEMPERATURE ENHANCEMENT PLAN AND WHITEWATER RELEASES</b>		
<b>DATE</b>	<b>START TIME</b>	<b>STOP TIME</b>
June 18	1100	1400
August 2	1100	1400



**TEMPERATURE ENHANCEMENT PLAN DAILY SHEETS**



**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

1080 = CFS River Flow at Oakland

June 1, 2008

Simulate a Ra

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS  <i>[Signature]</i> 6/1/08
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	23.89	Air Temp, Elkins WV - Degree C	75	Air Temp, Elkins WV - Degree F
CCF	36	Cloud Cover Factor, Elkins WV	PTCLDY	Cloud Cover, Elkins WV
T7	15.25	River Temp Sang Run @700		
T9	-	River Temp Sang Run @900		
T11	-	River Temp Sang Run @1100		
T12	-	River Temp Sang Run @1200		
T14	-	River Temp Sang Run @1400		
T15	-	River Temp Sang Run @1500		
Q	1080.00	River Flow at Oakland		


**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

712 = CFS River Flow at Oakland

June 2, 2008

Simulate a Rar

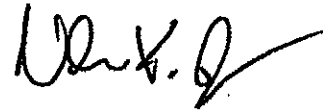
Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS  
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	23.33	Air Temp, Elkins WV - Degree C
CCF	100	Cloud Cover Factor, Elkins WV
T7	15.30	River Temp Sang Run @700
T9	--	River Temp Sang Run @900
T11	--	River Temp Sang Run @1100
T12	--	River Temp Sang Run @1200
T14	--	River Temp Sang Run @1400
T15	--	River Temp Sang Run @1500
Q	712.00	River Flow at Oakland

74  
VARCLDY

Air Temp, Elkins WV - Degree F  
Cloud Cover, Elkins WV





**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**466 = CFS River Flow at Oakland**

**June 3, 2008**

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	26.11	Air Temp, Elkins WV - Degree C	79	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	RAIN	Cloud Cover, Elkins WV
T7	15.30	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	466.00	River Flow at Oakland		

*Scott J. Smith*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**513 = CFS River Flow at Oakland**

**June 4, 2008**

Simulate & Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	25.00	Air Temp, Elkins WV - Degree C	77	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	RAIN	Cloud Cover, Elkins WV
T7	15.98	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	513.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

2030 = CFS River Flow at Oakland

June 5, 2008

Simulate a Ra

Print info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	28.89	Air Temp, Elkins WV - Degree C	84	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	15.40	River Temp Sang Run @700		
T9	-	River Temp Sang Run @900		
T11	-	River Temp Sang Run @1100		
T12	-	River Temp Sang Run @1200		
T14	-	River Temp Sang Run @1400		
T15	-	River Temp Sang Run @1500		
Q	2030.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**886 = CFS River Flow at Oakland**

**June 6, 2008**

Simulate a run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	24.00 (23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	33.33	Air Temp, Elkins WV - Degree C	92	Air Temp, Elkins WV - Degree F
CCF	9	Cloud Cover Factor, Elkins WV	MOCLEAR	Cloud Cover, Elkins WV
T7	15.70	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	886.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

526 = CFS River Flow at Oakland

June 7, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	27.78	Air Temp, Elkins WV - Degree C	82	Air Temp, Elkins WV - Degree F
CCF	1	Cloud Cover Factor, Elkins WV	SUNNY	Cloud Cover, Elkins WV
T7	16.02	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	526.00	River Flow at Oakland		

B

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**378 = CFS River Flow at Oakland**

**June 8, 2008**

Simulate a run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	23.93 (23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	29.44	Air Temp, Elkins WV - Degree C	85	Air Temp, Elkins WV - Degree F
CCF	1	Cloud Cover Factor, Elkins WV	SUNNY	Cloud Cover, Elkins WV
T7	18.74	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	378.00	River Flow at Oakland		

AB

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

284 = CFS River Flow at Oakland

June 9, 2008

Simulate a Ra

Print info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	24.87 (23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	31.11	Air Temp, Elkins WV - Degree C	88	Air Temp, Elkins WV - Degree F
CCF	1	Cloud Cover Factor, Elkins WV	SUNNY	Cloud Cover, Elkins WV
T7	19.93	River Temp Sang Run @700		
T9	-	River Temp Sang Run @900		
T11	-	River Temp Sang Run @1100		
T12	-	River Temp Sang Run @1200		
T14	-	River Temp Sang Run @1400		
T15	-	River Temp Sang Run @1500		
Q	284.00	River Flow at Oakland		

*ADE*

*W.V. J*

YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

226 = CFS River Flow at Oakland

June 10, 2008

Simulate a Bar

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	28.89	Air Temp, Elkins WV - Degree C	84	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	20.33	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	226.00	River Flow at Oakland		

*R. Roberts*

*Scott Clark*



YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

194 = CFS River Flow at Oakland

June 11, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	28.33	Air Temp, Elkins WV - Degree C	83	Air Temp, Elkins WV - Degree F
CCF	64	Cloud Cover Factor, Elkins WV	MOCLDY	Cloud Cover, Elkins WV
T7	19.88	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	194.00	River Flow at Oakland		

*Scott Link*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

171 = CFS River Flow at Oakland

June 12, 2008

Simulate a R

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	24.17 (23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	30.00	Air Temp, Elkins WV - Degree C	86	Air Temp, Elkins WV - Degree F
CCF	- 1	Cloud Cover Factor, Elkins WV	SUNNY	Cloud Cover, Elkins WV
T7	18.92	River Temp Sang Run @700		
T9	-	River Temp Sang Run @900		
T11	-	River Temp Sang Run @1100		
T12	-	River Temp Sang Run @1200		
T14	-	River Temp Sang Run @1400		
T15	-	River Temp Sang Run @1500		
Q	171.00	River Flow at Oakland		

*Scott J Curtis*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

142 = CFS River Flow at Oakland

June 13, 2008

Simulate a R

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	31.11	Air Temp, Elkins WV - Degree C	88	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	19.54	River Temp Sang Run @700	<i>Walter J. Culican</i>	
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	142.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**156 = CFS River Flow at Oakland**

**June 14, 2008**

Simulate a Ra

Print info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	23.89	Air Temp, Elkins WV - Degree C	75	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	20.18	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	156.00	River Flow at Oakland		

*Scotty Link*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

337 = CFS River Flow at Oakland

June 15, 2008

Simulate a R

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	17.22	Air Temp, Elkins WV - Degree C	63	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	VARCLDY	Cloud Cover, Elkins WV
T7	19.26	River Temp Sang Run @700		
T9	-	River Temp Sang Run @900		
T11	-	River Temp Sang Run @1100		
T12	-	River Temp Sang Run @1200		
T14	-	River Temp Sang Run @1400		
T15	-	River Temp Sang Run @1500		
Q	337.00	River Flow at Oakland		

*Scott Buntz*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

171 = CFS River Flow at Oakland

June 16, 2008

Simulate a Ra

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	25.00	Air Temp, Elkins WV - Degree C	77	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	18.96	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	171.00	River Flow at Oakland		

*William P. Culerson*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

383 = CFS River Flow at Oakland

June 17, 2008

Simulate a Ra

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	19.44	Air Temp, Elkins WV - Degree C	67	Air Temp, Elkins WV - Degree F
CCF	36	Cloud Cover Factor, Elkins WV	PTCLDY	Cloud Cover, Elkins WV
T7	18.19	River Temp Sang Run @700		
T9	-	River Temp Sang Run @900		
T11	-	River Temp Sang Run @1100		
T12	-	River Temp Sang Run @1200		
T14	-	River Temp Sang Run @1400		
T15	-	River Temp Sang Run @1500		
Q	383.00	River Flow at Oakland		

*William P. Cubie*

*AB*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

200 = CFS River Flow at Oakland

June 18, 2008

Simulate a Ra

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	17.22	Air Temp, Elkins WV - Degree C	63	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	16.31	River Temp Sang Run @700		
T9	-	River Temp Sang Run @900		
T11	-	River Temp Sang Run @1100		
T12	-	River Temp Sang Run @1200		
T14	-	River Temp Sang Run @1400		
T15	-	River Temp Sang Run @1500		
Q	200.00	River Flow at Oakland		

*Handwritten signature/initials*



YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

168 = CFS River Flow at Oakland

June 19, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	21.67	Air Temp, Elkins WV - Degree C	71	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	15.63	River Temp Sang Run @700		
T9	--	River Temp Sang Run @800		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	168.00	River Flow at Oakland		

*R. M. [Signature]*  
*J-J*

YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

148 = CFS River Flow at Oakland

June 20, 2008

Simulate a Rar

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	25.00	Air Temp, Elkins WV - Degree C
CCF	100	Cloud Cover Factor, Elkins WV
T7	15.80	River Temp Sang Run @700
T9	--	River Temp Sang Run @900
T11	--	River Temp Sang Run @1100
T12	--	River Temp Sang Run @1200
T14	--	River Temp Sang Run @1400
T15	--	River Temp Sang Run @1500
Q	148.00	River Flow at Oakland

77  
TSTRMS

Air Temp, Elkins WV - Degree F  
Cloud Cover, Elkins WV

*R. W. White*

YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

127 = CFS River Flow at Oakland

June 21, 2008

Simulate a R

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS  <i>78</i> <i>6-21-08</i>
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	25.56	Air Temp, Elkins WV - Degree C	78	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	16.62	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	127.00	River Flow at Oakland		

YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

207 = CFS River Flow at Oakland

June 22, 2008

Simulate a Ra

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS  <i>J &amp; J</i>
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	24.44	Air Temp, Elkins WV - Degree C	76	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	17.66	River Temp Sang Run @700		
T9	-	River Temp Sang Run @900		
T11	-	River Temp Sang Run @1100		
T12	-	River Temp Sang Run @1200		
T14	-	River Temp Sang Run @1400		
T15	-	River Temp Sang Run @1500		
Q	207.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

Simulate a Rai

153 = CFS River Flow at Oakland

June 23, 2008

Print info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	25.00	Air Temp, Elkins WV - Degree C	77	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	18.62	River Temp Sang Run @700		
T9	-	River Temp Sang Run @900		
T11	-	River Temp Sang Run @1100		
T12	-	River Temp Sang Run @1200		
T14	-	River Temp Sang Run @1400		
T15	-	River Temp Sang Run @1500		
Q	153.00	River Flow at Oakland		

*Scott G. Smith*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

Simulate a Ra

118 = CFS River Flow at Oakland

June 24, 2008

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	22.22	Air Temp, Elkins WV - Degree C	72	Air Temp, Elkins WV - Degree F
CCF	36	Cloud Cover Factor, Elkins WV	PTCLDY	Cloud Cover, Elkins WV
T7	17.72	River Temp Sang Run @700		
T9	-	River Temp Sang Run @900		
T11	-	River Temp Sang Run @1100		
T12	-	River Temp Sang Run @1200		
T14	-	River Temp Sang Run @1400		
T15	-	River Temp Sang Run @1500		
Q	118.00	River Flow at Oakland		

*Handwritten signature*

*Handwritten initials AB*

YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

Simulate a Run

103 = CFS River Flow at Oakland

June 25, 2008

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	25.00	Air Temp, Elkins WV - Degree C	77	Air Temp, Elkins WV - Degree F
CCF	1	Cloud Cover Factor, Elkins WV	SUNNY	Cloud Cover, Elkins WV
T7	17.59	River Temp Sang Run @700		
T9	—	River Temp Sang Run @900		
T11	—	River Temp Sang Run @1100		
T12	—	River Temp Sang Run @1200		
T14	—	River Temp Sang Run @1400		
T15	—	River Temp Sang Run @1500		
Q	103.00	River Flow at Oakland		

*B*

*Scott Curtis*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**75 = CFS River Flow at Oakland**

**June 26, 2008**

Simulate a Ra

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	23.04 (23 to 26.4)	Check Again at 0900
0900	(23 to 25.9)	
1100	(23 to 25.4)	No Further Predictions Necessary Today
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	29.44	Air Temp, Elkins WV - Degree C	85	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	18.71	River Temp Sang Run @700		
T9	18.83	River Temp Sang Run @900		
T11	—	River Temp Sang Run @1100		
T12	—	River Temp Sang Run @1200		
T14	—	River Temp Sang Run @1400		
T15	—	River Temp Sang Run @1500		
Q	75.00	River Flow at Oakland		

*Scott J. Curtis*



**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

80 = CFS River Flow at Oakland

June 27, 2008

Simulate a Ra

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	No Further Predictions Necessary Today  J.S.J. 6-27-08
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	27.22	Air Temp, Elkins WV - Degree C	81	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	19.69	River Temp Sang Run @700		
T9	-	River Temp Sang Run @900		
T11	-	River Temp Sang Run @1100		
T12	-	River Temp Sang Run @1200		
T14	-	River Temp Sang Run @1400		
T15	-	River Temp Sang Run @1500		
Q	80.00	River Flow at Oakland		

YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

Simulate a - al

73 = CFS River Flow at Oakland

June 28, 2008

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	No Further Predictions Necessary Today  <i>J=J.</i>
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	27.22	Air Temp, Elkins WV - Degree C	81	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	19.97	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	73.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**162 = CFS River Flow at Oakland**

**June 29, 2008**

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS  <i>Jsj.</i>
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	26.11	Air Temp, Elkins WV - Degree C	79	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	19.31	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	162.00	River Flow at Oakland		

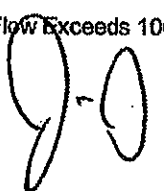
**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**244 = CFS River Flow at Oakland**

**June 30, 2008**

Simulate a Rar

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS  
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	21.11	Air Temp, Elkins WV - Degree C	70	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	19.70	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	244.00	River Flow at Oakland		

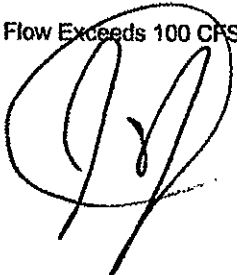
YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

159 = CFS River Flow at Oakland

July 1, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS 
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	20.56	Air Temp, Elkins WV - Degree C	69	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	18.71	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	159.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**159 = CFS River Flow at Oakland**

**July 2, 2008**

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	26.67	Air Temp, Elkins WV - Degree C	80	Air Temp, Elkins WV - Degree F
CCF	1	Cloud Cover Factor, Elkins WV	SUNNY	Cloud Cover, Elkins WV
T7	16.57	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	159.00	River Flow at Oakland		

*Scott Link*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

109 = CFS River Flow at Oakland

July 3, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	27.22	Air Temp, Elkins WV - Degree C	81	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	17.53	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	109.00	River Flow at Oakland		

*Justin D. Links*

*18*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

194 = CFS River Flow at Oakland

July 4, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	22.78	Air Temp, Elkins WV - Degree C	73	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	19.56	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	194.00	River Flow at Oakland		

*Handwritten signature*

*Handwritten initials*



**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**577 = CFS River Flow at Oakland**

**July 5, 2008**

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	23.33	Air Temp, Elkins WV - Degree C	74	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	18.20	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	577.00	River Flow at Oakland		

*Scott Curtis*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**352 = CFS River Flow at Oakland**

**July 6, 2008**

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	27.22	Air Temp, Elkins WV - Degree C	81	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	18.30	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	352.00	River Flow at Oakland		

*Atty Cusick*


YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

284 = CFS River Flow at Oakland

July 7, 2008

Simulate a Run

Print info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS 
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	27.78	Air Temp, Elkins WV - Degree C	82	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	18.80	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	284.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**679 = CFS River Flow at Oakland**

**July 8, 2008**

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS  <i>AA</i>
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	29.44	Air Temp, Elkins WV - Degree C	85	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	18.30	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	679.00	River Flow at Oakland		


**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**323 = CFS River Flow at Oakland**

**July 9, 2008**

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS  
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	23.33	Air Temp, Elkins WV - Degree C	74	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	20.14	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	323.00	River Flow at Oakland		


**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**272      = CFS River Flow at Oakland**

**July 10, 2008**

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS  
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	26.11	Air Temp, Elkins WV - Degree C	79	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	VARCLDY	Cloud Cover, Elkins WV
T7	18.93	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	272.00	River Flow at Oakland		

YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

Simulate a Rar

194 = CFS River Flow at Oakland

July 11, 2008

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	28.89	Air Temp, Elkins WV - Degree C	84	Air Temp, Elkins WV - Degree F
CCF	1	Cloud Cover Factor, Elkins WV	SUNNY	Cloud Cover, Elkins WV
T7	18.74	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	194.00	River Flow at Oakland		

*Scott J. Curb*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

153 = CFS River Flow at Oakland

July 12, 2008

Simulate a Year

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	30.56	Air Temp, Elkins WV - Degree C	87	Air Temp, Elkins WV - Degree F
CCF	36	Cloud Cover Factor, Elkins WV	HAZE	Cloud Cover, Elkins WV
T7	19.67	River Temp Sang Run @700		
T9	-	River Temp Sang Run @900		
T11	-	River Temp Sang Run @1100		
T12	-	River Temp Sang Run @1200		
T14	-	River Temp Sang Run @1400		
T15	-	River Temp Sang Run @1500		
Q	153.00	River Flow at Oakland		

*R. P. White*

*wpc*



YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

124 = CFS River Flow at Oakland

July 13, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	26.67	Air Temp, Elkins WV - Degree C	80	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	21.21	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	124.00	River Flow at Oakland		

*R. White* *wpc*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**124 = CFS River Flow at Oakland**

**July 14, 2008**

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	25.00	Air Temp, Elkins WV - Degree C	77	Air Temp, Elkins WV - Degree F
CCF	36	Cloud Cover Factor, Elkins WV	HAZE	Cloud Cover, Elkins WV
T7	19.97	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	124.00	River Flow at Oakland		

*WPC*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**95 = CFS River Flow at Oakland**

**July 15, 2008**

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	No Further Predictions Necessary Today
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	27.78	Air Temp, Elkins WV - Degree C	82	Air Temp, Elkins WV - Degree F
CCF	36	Cloud Cover Factor, Elkins WV	PTSUNY	Cloud Cover, Elkins WV
T7	18.20	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	95.00	River Flow at Oakland		

YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

78 = CFS River Flow at Oakland

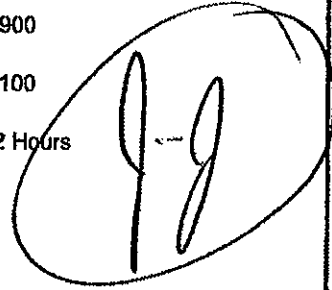
July 16, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Check Again at 0900
0900	(23 to 25.9)	Check Again at 1100
1100	(23 to 25.4)	Release at 1230 for 2 Hours
1200	(23 to 25.3)	--
1400	(23 to 25.2)	--
1500		--

*- put energy into the market  
13 from 2 hrs.*



Tair °C	29.44	Air Temp, Elkins WV - Degree C	85	Air Temp, Elkins WV - Degree F
CCF	36	Cloud Cover Factor, Elkins WV	PTSUNY	Cloud Cover, Elkins WV
T7	18.18	River Temp Sang Run @700		
T9	18.04	River Temp Sang Run @900		
T11	19.58	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	78.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

Simulate a Rar

68      = CFS River Flow at Oakland

July 17, 2008

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Check Again at 0900
0900	(23 to 25.9)	Check Again at 1100
1100	(23 to 25.4)	Release at 1230 for 2 Hours
1200	(23 to 25.3)	--
1400	(23 to 25.2)	--
1500		--

Tair °C	31.11	Air Temp, Elkins WV - Degree C	88	Air Temp, Elkins WV - Degree F
CCF	36	Cloud Cover Factor, Elkins WV	PTCLDY	Cloud Cover, Elkins WV
T7	19.07	River Temp Sang Run @700		
T9	19.26	River Temp Sang Run @900		
T11	20.75	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	68.00	River Flow at Oakland		

YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

60 = CFS River Flow at Oakland

July 18, 2008

Simulate a Ra

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Release at 1100 for 2 Hours
0900	(23 to 25.9)	--
1100	(23 to 25.4)	--
1200	(23 to 25.3)	--
1400	(23 to 25.2)	--
1500		--

*Handwritten note:*  
 93g  
 7-1000

Tair °C	31.67	Air Temp, Elkins WV - Degree C	89	Air Temp, Elkins WV - Degree F
CCF	1	Cloud Cover Factor, Elkins WV	SUNNY	Cloud Cover, Elkins WV
T7	20.42	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	60.00	River Flow at Oakland		

**★ NOTE:**

WWR today from 1100-1400 hrs  
 Temp Enhance. Run required @ same  
 time simultaneous w/ WWR..

YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

50 = CFS River Flow at Oakland

July 19, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Check Again at 0900
0900	(23 to 25.9)	Release at 1100 for 2 Hours
1100	(23 to 25.4)	--
1200	(23 to 25.3)	--
1400	(23 to 25.2)	--
1500		--

*[Handwritten signature]*  
7-19

Tair °C	31.11	Air Temp, Elkins WV - Degree C	88	Air Temp, Elkins WV - Degree F
CCF	36	Cloud Cover Factor, Elkins WV	HAZE	Cloud Cover, Elkins WV
T7	19.04	River Temp Sang Run @700		
T9	19.68	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	50.00	River Flow at Oakland		

*[Handwritten signature]*

YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

45 = CFS River Flow at Oakland

July 20, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Check Again at 0900
0900	(23 to 25.9)	Check Again at 1100
1100	(23 to 25.4)	Release at 1230 for 2 Hours
1200	(23 to 25.3)	--
1400	(23 to 25.2)	--
1500		--

*J.P.*  
*7-20-08*

Tair °C	30.56	Air Temp, Elkins WV - Degree C	87	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	20.07	River Temp Sang Run @700		
T9	20.00	River Temp Sang Run @900		
T11	21.66	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	45.00	River Flow at Oakland		

*R. J. ...*



**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**165 = CFS River Flow at Oakland**

**July 21, 2008**

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	29.44	Air Temp, Elkins WV - Degree C	85	Air Temp, Elkins WV - Degree F
CCF	1	Cloud Cover Factor, Elkins WV	SUNNY	Cloud Cover, Elkins WV
T7	21.10	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	165.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

93 = CFS River Flow at Oakland

July 22, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Check Again at 0900
0900	(23 to 25.9)	
1100	(23 to 25.4)	--
1200	(23 to 25.3)	--
1400	(23 to 25.2)	--
1500		--

Tair °C	29.44	Air Temp, Elkins WV - Degree C	85	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	21.80	River Temp Sang Run @700		
T9	2.50	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	93.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

248 = CFS River Flow at Oakland

July 23, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	26.11	Air Temp, Elkins WV - Degree C	79	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	21.50	River Temp Sang Run @700	<i>wpc</i>	
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	248.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**483 = CFS River Flow at Oakland**

**July 24, 2008**

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	25.56	Air Temp, Elkins WV - Degree C	78	Air Temp, Elkins WV - Degree F
CCF	1	Cloud Cover Factor, Elkins WV	SUNNY	Cloud Cover, Elkins WV
T7	19.24	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	483.00	River Flow at Oakland		

YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

222 = CFS River Flow at Oakland

July 25, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS  <i>J-J</i>
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	27.78	Air Temp, Elkins WV - Degree C	82	Air Temp, Elkins WV - Degree F
CCF	1	Cloud Cover Factor, Elkins WV	SUNNY	Cloud Cover, Elkins WV
T7	18.28	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	222.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

156 = CFS River Flow at Oakland

July 26, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS  <i>[Signature]</i>
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	27.22	Air Temp, Elkins WV - Degree C	81	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	19.48	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	156.00	River Flow at Oakland		

*[Signature]*

YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

124 = CFS River Flow at Oakland

July 27, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	<i>R/W</i> --
1100	(23 to 25.4)	--
1200	(23 to 25.3)	--
1400	(23 to 25.2)	--
1500		--

Tair °C	28.89	Air Temp, Elkins WV - Degree C	84	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	20.51	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	124.00	River Flow at Oakland		

*WPC*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**115 = CFS River Flow at Oakland**

**July 28, 2008**


Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	28.33	Air Temp, Elkins WV - Degree C	83	Air Temp, Elkins WV - Degree F
CCF	36	Cloud Cover Factor, Elkins WV	HAZE	Cloud Cover, Elkins WV
T7	19.32	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	115.00	River Flow at Oakland		

*WPC*





YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

90 = CFS River Flow at Oakland

July 29, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	No Further Predictions Necessary Today
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	30.00	Air Temp, Elkins WV - Degree C	86	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	19.84	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	90.00	River Flow at Oakland		

*[Handwritten signature]* WPC

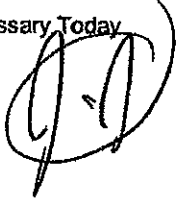
**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

73 = CFS River Flow at Oakland

July 30, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	No Further Predictions Necessary Today 
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	27.22	Air Temp, Elkins WV - Degree C	81 TSTRMS	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV		Cloud Cover, Elkins WV
T7	20.18	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	73.00	River Flow at Oakland		

*RAH*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**162 = CFS River Flow at Oakland**

**July 31, 2008**

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	27.22	Air Temp, Elkins WV - Degree C	81	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	21.53	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	162.00	River Flow at Oakland		

YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

93 = CFS River Flow at Oakland

August 1, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Check Again at 0900
0900	(23 to 25.9)	Check Again at 1100
1100	(23 to 25.4)	Release at 1230 for 2 Hours
1200	(23 to 25.3)	--
1400	(23 to 25.2)	--
1500		--

*J. J.*  
8/1/08

Tair °C	28.89	Air Temp, Elkins WV - Degree C	84	Air Temp, Elkins WV - Degree F
CCF	36	Cloud Cover Factor, Elkins WV	PTCLDY	Cloud Cover, Elkins WV
T7	20.14	River Temp Sang Run @700		
T9	20.07	River Temp Sang Run @900		
T11	21.07	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	93.00	River Flow at Oakland		

WWR today 11 - 2 pm 19 min

→ We will run UNTIL 2:30 pm to satisfy both the WWR AND TEMP RUN.

*J. J.*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**80 = CFS River Flow at Oakland**

**August 2, 2008**

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	No Further Predictions Necessary Today  <i>J. J.</i>
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	26.67	Air Temp, Elkins WV - Degree C	80	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	19.50	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	80.00	River Flow at Oakland		

YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

471 = CFS River Flow at Oakland

August 3, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS  JW 8-3-08
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	26.11	Air Temp, Elkins WV - Degree C	79	Air Temp, Elkins WV - Degree F
CCF	1	Cloud Cover Factor, Elkins WV	SUNNY	Cloud Cover, Elkins WV
T7	19.94	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	471.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

184 = CFS River Flow at Oakland

August 4, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	28.89	Air Temp, Elkins WV - Degree C	84	Air Temp, Elkins WV - Degree F
CCF	9	Cloud Cover Factor, Elkins WV	MOSUNNY	Cloud Cover, Elkins WV
T7	18.61	River Temp Sang Run @700	<i>WPC</i>	
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	184.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

139 = CFS River Flow at Oakland

August 5, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	28.33	Air Temp, Elkins WV - Degree C	83	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	19.34	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	139.00	River Flow at Oakland		

*DPH*      *WPC*



**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

118 = CFS River Flow at Oakland

August 6, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	26.11	Air Temp, Elkins WV - Degree C	79	Air Temp, Elkins WV - Degree F
CCF	1	Cloud Cover Factor, Elkins WV	SUNNY	Cloud Cover, Elkins WV
T7	19.75	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	118.00	River Flow at Oakland		

*R. [Signature]*      *wrc*

YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

197 = CFS River Flow at Oakland

August 7, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	25.56	Air Temp, Elkins WV - Degree C	78	Air Temp, Elkins WV - Degree F
CCF	64	Cloud Cover Factor, Elkins WV	MOCLDY	Cloud Cover, Elkins WV
T7	19.94	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	197.00	River Flow at Oakland		

*R. White WPC*

YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

118 = CFS River Flow at Oakland

August 8, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Temperature Plan not Required Today - Flow Exceeds 100 CFS
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	23.33	Air Temp, Elkins WV - Degree C	74	Air Temp, Elkins WV - Degree F
CCF	64	Cloud Cover Factor, Elkins WV	MOCLDY	Cloud Cover, Elkins WV
T7	19.03	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	118.00	River Flow at Oakland		

*Patrick*  
*Scotty*

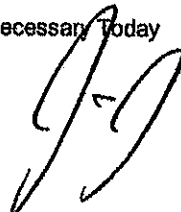
**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

93 = CFS River Flow at Oakland

August 9, 2008

Simulate a Run

Print info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	No Further Predictions Necessary Today 
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	24.44	Air Temp, Elkins WV - Degree C	76	Air Temp, Elkins WV - Degree F
CCF	64	Cloud Cover Factor, Elkins WV	MOCLDY	Cloud Cover, Elkins WV
T7	16.58	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	93.00	River Flow at Oakland		

*Handwritten signature*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**78      = CFS River Flow at Oakland**

**August 10, 2008**

Simulate a Run

Print info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	No Further Predictions Necessary Today <i>JH</i>
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	23.89	Air Temp, Elkins WV - Degree C	75	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	17.40	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	78.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

68

= CFS River Flow at Oakland

August 11, 2008

Simulate a Ra

Print info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	No Further Predictions Necessary Today  <i>PS</i>
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	20.56	Air Temp, Elkins WV - Degree C	69	Air Temp, Elkins WV - Degree F
CCF	36	Cloud Cover Factor, Elkins WV	PTCLDY	Cloud Cover, Elkins WV
T7	17.27	River Temp Sang Run @700		
T9	-	River Temp Sang Run @900		
T11	-	River Temp Sang Run @1100		
T12	-	River Temp Sang Run @1200		
T14	-	River Temp Sang Run @1400		
T15	-	River Temp Sang Run @1500		
Q	68.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

60 = CFS River Flow at Oakland

August 12, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	No Further Predictions Necessary Today <i>J-D</i>
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	21.67	Air Temp, Elkins WV - Degree C	71	Air Temp, Elkins WV - Degree F
CCF	1	Cloud Cover Factor, Elkins WV	SUNNY	Cloud Cover, Elkins WV
T7	16.28	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	60.00	River Flow at Oakland		

*AB*

YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

54 = CFS River Flow at Oakland

August 13, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	No Further Predictions Necessary Today
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	25.56	Air Temp, Elkins WV - Degree C	78	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	16.90	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	54.00	River Flow at Oakland		

*WPC*

*AB*



**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

48 = CFS River Flow at Oakland

August 14, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	No Further Predictions Necessary Today
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	26.11	Air Temp, Elkins WV - Degree C	79	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	VARCLDY	Cloud Cover, Elkins WV
T7	17.50	River Temp Sang Run @700	<i>WPC</i>	
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	48.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

45 = CFS River Flow at Oakland

August 15, 2008

Simulate a Ran

Print info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	No Further Predictions Necessary Today
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	23.33	Air Temp, Elkins WV - Degree C	74	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	17.35	River Temp Sang Run @700	<i>WFC</i>	
T9	-	River Temp Sang Run @900		
T11	-	River Temp Sang Run @1100		
T12	-	River Temp Sang Run @1200		
T14	-	River Temp Sang Run @1400		
T15	-	River Temp Sang Run @1500		
Q	45.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

Simulate a Run

41 = CFS River Flow at Oakland

August 16, 2008

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	24.15 (23 to 26.4)	Check Again at 0900
0900	23.79 (23 to 25.9)	Check Again at 1100
1100	23.58 (23 to 25.4)	Check Again at 1200
1200	23.14 (23 to 25.3)	Check Again at 1400
1400		No Further Predictions Necessary Today
1500	23 to 25.2	

Tair °C	25.00	Air Temp, Elkins WV - Degree C	77	Air Temp, Elkins WV - Degree F
CCF	1	Cloud Cover Factor, Elkins WV	SUNNY	Cloud Cover, Elkins WV
T7	16.65	River Temp Sang Run @700	<i>WPC</i>	
T9	16.49	River Temp Sang Run @900		
T11	17.85	River Temp Sang Run @1100		
T12	18.53	River Temp Sang Run @1200		
T14	19.03	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	41.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**38 = CFS River Flow at Oakland**

**August 17, 2008**

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Check Again at 0900
0900	(23 to 25.9)	Check Again at 1100
1100	(23 to 25.4)	Check Again at 1200
1200	(23 to 25.3)	Check Again at 1400
1400	(23 to 25.2)	Check Again at 1500
1500		Check Again Tomorrow at 0700

Tair °C	26.11	Air Temp, Elkins WV - Degree C	79	Air Temp, Elkins WV - Degree F
CCF	36	Cloud Cover Factor, Elkins WV	PTSUNY	Cloud Cover, Elkins WV
T7	16.29	River Temp Sang Run @700		
T9	16.36	River Temp Sang Run @900		
T11	17.96	River Temp Sang Run @1100		
T12	18.81	River Temp Sang Run @1200		
T14	20.79	River Temp Sang Run @1400		
T15	21.90	River Temp Sang Run @1500		
Q	38.00	River Flow at Oakland		

*William P. Calver*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

32 = CFS River Flow at Oakland

August 18, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	25.34 (23 to 26.4)	Check Again at 0900
0900	25.35 (23 to 25.9)	Check Again at 1100
1100	24.79 (23 to 25.4)	Check Again at 1200
1200	24.22 (23 to 25.3)	Check Again at 1400
1400		No Further Predictions Necessary Today
1500		-

Tair °C	27.78	Air Temp, Elkins WV - Degree C	82	Air Temp, Elkins WV - Degree F
CCF	1	Cloud Cover Factor, Elkins WV	SUNNY	Cloud Cover, Elkins WV
T7	16.46	River Temp Sang Run @700		
T9	16.71	River Temp Sang Run @900		
T11	18.36	River Temp Sang Run @1100		
T12	19.08	River Temp Sang Run @1200		
T14	19.25	River Temp Sang Run @1400		
T15	-	River Temp Sang Run @1500		
Q	32.00	River Flow at Oakland		

*Scotty Ambs*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

30 = CFS River Flow at Oakland

August 19, 2008

Simulate a run

Print info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	25.06 (23 to 26.4)	Check Again at 0900
0900	25.08 (23 to 25.9)	Check Again at 1100
1100	25.12 (23 to 25.4)	Check Again at 1200
1200	24.62 (23 to 25.3)	Check Again at 1400
1400	24.52 (23 to 25.2)	Check Again at 1500
1500	24.14	Check Again Tomorrow at 0700

Tair °C	27.22	Air Temp, Elkins WV - Degree C	81	Air Temp, Elkins WV - Degree F
CCF	9	Cloud Cover Factor, Elkins WV	MOSUNNY	Cloud Cover, Elkins WV
T7	16.39	River Temp Sang Run @700		
T9	16.64	River Temp Sang Run @900		
T11	18.71	River Temp Sang Run @1100		
T12	19.60	River Temp Sang Run @1200		
T14	22.06	River Temp Sang Run @1400		
T15	22.67	River Temp Sang Run @1500		
Q	30.00	River Flow at Oakland		

*Scott J. [Signature]*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

27 = CFS River Flow at Oakland

August 20, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Check Again at 0900
0900	(23 to 25.9)	Check Again at 1100
1100	(23 to 25.4)	Check Again at 1200
1200	(23 to 25.3)	Check Again at 1400
1400	(23 to 25.2)	Check Again at 1500
1500		Release ASAP - not later than 1530 for 1 hour

Tair °C	28.33	Air Temp, Elkins WV - Degree C	83	Air Temp, Elkins WV - Degree F
CCF	36	Cloud Cover Factor, Elkins WV	PTCLDY	Cloud Cover, Elkins WV
T7	17.26	River Temp Sang Run @700		
T9	17.44	River Temp Sang Run @900		
T11	18.96	River Temp Sang Run @1100		
T12	19.85	River Temp Sang Run @1200		
T14	22.55	River Temp Sang Run @1400		
T15	24.09	River Temp Sang Run @1500		
Q	27.00	River Flow at Oakland		

*Handwritten signature*

YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

Simulate a Run

26 = CFS River Flow at Oakland

August 21, 2008

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	25.48 (23 to 26.4)	Check Again at 0900
0900	25.33 (23 to 25.9)	Check Again at 1100
1100	24.97 (23 to 25.4)	Check Again at 1200
1200	25.18 (23 to 25.3)	Check Again at 1400
1400	(23 to 25.2)	Release ASAP - not later than 1430 for 1 hour
1500		

Tair °C	26.67	Air Temp, Elkins WV - Degree C	80	Air Temp, Elkins WV - Degree F
CCF	1	Cloud Cover Factor, Elkins WV	SUNNY	Cloud Cover, Elkins WV
T7	17.70	River Temp Sang Run @700		
T9	17.69	River Temp Sang Run @900		
T11	19.27	River Temp Sang Run @1100		
T12	20.63	River Temp Sang Run @1200		
T14	23.37	River Temp Sang Run @1400		
T15	-	River Temp Sang Run @1500		
Q	26.00	River Flow at Oakland		

*Scott J. Curtis*

AB



YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

Simulate a Ran

22 = CFS River Flow at Oakland

August 22, 2008

Print info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	25.60 (23 to 26.4)	Check Again at 0900
0900	25.59 (23 to 25.9)	Check Again at 1100
1100	25.26 (23 to 25.4)	Check Again at 1200
1200	25.19 (23 to 25.3)	Check Again at 1400
1400		No Further Predictions Necessary Today
1500		

Tair °C	26.67	Air Temp, Elkins WV - Degree C	80	Air Temp, Elkins WV - Degree F
CCF	1	Cloud Cover Factor, Elkins WV	SUNNY	Cloud Cover, Elkins WV
T7	18.04	River Temp Sang Run @700		
T9	18.12	River Temp Sang Run @900		
T11	19.73	River Temp Sang Run @1100		
T12	20.82	River Temp Sang Run @1200		
T14	20.40	River Temp Sang Run @1400		
T15	-	River Temp Sang Run @1500		
Q	22.00	River Flow at Oakland		

wpc

AB

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

Simulate a Run

20 = CFS River Flow at Oakland

August 23, 2008

Print info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Release at 1100 for 2 Hours
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	30.00	Air Temp, Elkins WV - Degree C	86	Air Temp, Elkins WV - Degree F
CCF	1	Cloud Cover Factor, Elkins WV	SUNNY	Cloud Cover, Elkins WV
T7	17.70	River Temp Sang Run @700	<i>WPC</i>	
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	20.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

Simulate a Ran

19 = CFS River Flow at Oakland

August 24, 2008

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	Release at 1100 for 2 Hours
0900	(23 to 25.9)	--
1100	(23 to 25.4)	--
1200	(23 to 25.3)	--
1400	(23 to 25.2)	--
1500		--

Tair °C	29.44	Air Temp, Elkins WV - Degree C	85	Air Temp, Elkins WV - Degree F
CCF	1	Cloud Cover Factor, Elkins WV	SUNNY	Cloud Cover, Elkins WV
T7	18.30	River Temp Sang Run @700	<i>wpc</i>	
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	19.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

18 = CFS River Flow at Oakland

August 25, 2008

Simulate a ...

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	23.07 (23 to 26.4)	Check Again at 0900
0900	(23 to 25.9)	
1100	(23 to 25.4)	--
1200	(23 to 25.3)	--
1400	(23 to 25.2)	--
1500		--

Tair °C	23.33	Air Temp, Elkins WV - Degree C	74	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	19.30	River Temp Sang Run @700	<i>wpc</i>	
T9	19.10	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	18.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

19 = CFS River Flow at Oakland

August 26, 2008

Simulate a Rai

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	No Further Predictions Necessary Today
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	15.00	Air Temp, Elkins WV - Degree C	59	Air Temp, Elkins WV - Degree F
CCF	64	Cloud Cover Factor, Elkins WV	MOCLDY	Cloud Cover, Elkins WV
T7	17.76	River Temp Sang Run @700	<i>WPC</i>	
T9	-	River Temp Sang Run @900		
T11	-	River Temp Sang Run @1100		
T12	-	River Temp Sang Run @1200		
T14	-	River Temp Sang Run @1400		
T15	-	River Temp Sang Run @1500		
Q	19.00	River Flow at Oakland		

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

18 = CFS River Flow at Oakland

August 27, 2008

Simulate a Ran

Print info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	No Further Predictions Necessary Today
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	20.00	Air Temp, Elkins WV - Degree C	68	Air Temp, Elkins WV - Degree F
CCF	64	Cloud Cover Factor, Elkins WV	SHWRS	Cloud Cover, Elkins WV
T7	18.33	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	18.00	River Flow at Oakland		

*Scott Curtis*

YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN

29 = CFS River Flow at Oakland

August 28, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	No Further Predictions Necessary Today
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	21.11	Air Temp, Elkins WV - Degree C	70	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	16.69	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	29.00	River Flow at Oakland		

*Scott Curtis*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

52      = CFS River Flow at Oakland

August 29, 2008

Simulate a Run

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	(23 to 26.4)	No Further Predictions Necessary Today
0900	(23 to 25.9)	
1100	(23 to 25.4)	
1200	(23 to 25.3)	
1400	(23 to 25.2)	
1500		

Tair °C	26.67	Air Temp, Elkins WV - Degree C	80	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	18.37	River Temp Sang Run @700		
T9	--	River Temp Sang Run @900		
T11	--	River Temp Sang Run @1100		
T12	--	River Temp Sang Run @1200		
T14	--	River Temp Sang Run @1400		
T15	--	River Temp Sang Run @1500		
Q	52.00	River Flow at Oakland		

*Scott Curtis*



**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

**35 = CFS River Flow at Oakland**

**August 30, 2008**

Simulate a Run

Print info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	23.89 (23 to 26.4)	Check Again at 0900
0900	23.63 (23 to 25.9)	Check Again at 1100
1100	(23 to 25.4)	No Further Predictions Necessary Today
1200	(23 to 25.3)	-
1400	(23 to 25.2)	-
1500		-

Tair °C	27.22	Air Temp, Elkins WV - Degree C	81	Air Temp, Elkins WV - Degree F
CCF	100	Cloud Cover Factor, Elkins WV	TSTRMS	Cloud Cover, Elkins WV
T7	18.61	River Temp Sang Run @700		
T9	18.62	River Temp Sang Run @900		
T11	18.61	River Temp Sang Run @1100		
T12	-	River Temp Sang Run @1200		
T14	-	River Temp Sang Run @1400		
T15	-	River Temp Sang Run @1500		
Q	35.00	River Flow at Oakland		

*Scott J Curtis*

**YOUGHIOGHENY RIVER WATER TEMPERATURE ENHANCEMENT PLAN**

32 = CFS River Flow at Oakland

August 31, 2008

Simulate a Ra

Print Info for file

Time	Predicted Maximum River Water Temperature Degree C	Deep Creek Action
0700	25.99 (23 to 26.4)	Check Again at 0900
0900	25.76 (23 to 25.9)	Check Again at 1100
1100	25.20 (23 to 25.4)	Check Again at 1200
1200	25.22 (23 to 25.3)	Check Again at 1400
1400	25.05 (23 to 25.2)	Check Again at 1500
1500		Release ASAP - not later than 1530 for 1 hour

Tair °C	27.78	Air Temp, Elkins WV - Degree C	82	Air Temp, Elkins WV - Degree F
CCF	1	Cloud Cover Factor, Elkins WV	SUNNY	Cloud Cover, Elkins WV
T7	18.40	River Temp Sang Run @700		
T9	18.30	River Temp Sang Run @900		
T11	19.60	River Temp Sang Run @1100		
T12	20.70	River Temp Sang Run @1200		
T14	22.90	River Temp Sang Run @1400		
T15	24.00	River Temp Sang Run @1500		
Q	32.00	River Flow at Oakland		

*Scott Gantz*

**APPENDIX C**

**BYPASS FLOW OPERATION DATA TABLE AND  
USGS PROVISIONAL WATER DISCHARGE DATA TABLE**



**2008 Youghiogheny River Bypass Flow Provision**

<b>Month</b>	<b>Day</b>	<b>Flow at Oakland Gage</b>	<b>Bypass Flow Required</b>	<b>% Valve Open</b>
August	22	22	6	27
August	23	20	9	32
August	24	19	11	35
August	25	18	12	36
August	26	19	11	35
August	27	18	12	36
September	1	24	3	23
September	2	20	9	32
September	3	19	11	35
September	4	17	14	39
September	5	15	17	42
September	6	13	20	47
September	7	13	20	47
September	8	13	20	47
September	9	15	17	42
September	12	22	6	27
September	17	21	8	30
September	19	17	14	39
September	20	15	17	42
September	21	13	20	47
September	22	13	20	47
September	23	13	20	47
September	24	12	21	48
September	25	12	21	48
September	26	10	24	52
September	27	11	23	51
September	28	17	14	39
September	29	22	6	27
September	30	18	12	36
October	1	15	17	42
October	2	14	18	44
October	3	15	17	42
October	4	13	20	47
October	5	12	21	48
October	6	11	23	51
October	7	11	23	51
October	8	10	24	52
October	9	12	21	48
October	10	12	21	48
October	11	10	24	52
October	12	10	24	52
October	13	9	26	55
October	14	9	26	55
October	15	10	24	52
October	16	11	23	51
October	17	12	21	48
October	18	13	20	47
October	19	12	21	48



**USGS PROVISIONAL WATER DISCHARGE DATA FOR THE OAKLAND GAGE (GAGE NO. 03075500)  
FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008 (mean cfs)**

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Day of Month												
1	349	582	466	187	442	899	168	87	23	14	29	147
2	306	664	387	172	358	626	142	311	20	14	31	157
3	272	507	521	154	311	439	103	333	18	14	27	134
4	263	613	1180	212	375	1380	375	169	17	13	23	196
5	240	1490	2780	258	276	1690	509	132	14	12	20	300
6	1050	2240	1320	352	238	759	315	141	14	11	32	209
7	883	2870	784	370	212	480	412	168	14	11	31	191
8	571	1230	644	311	227	353	521	111	13	10	22	200
9	452	743	483	266	574	268	324	89	56	11	17	139
10	380	528	415	232	1520	215	246	75	72	11	16	1090
11	1280	404	410	210	1250	190	181	67	29	10	14	1580
12	1010	363	376	217	2210	163	145	58	48	9.1	14	3070
13	636	333	325	184	1200	138	124	52	103	8.6	26	1100
14	482	295	286	186	747	169	115	47	44	9.9	49	610
15	417	249	363	169	570	262	90	43	29	10	41	509
16	378	234	379	154	1680	188	75	40	24	12	74	726
17	333	251	326	144	1290	313	65	36	20	12	56	1930
18	341	499	411	134	1250	191	56	32	18	14	45	1440
19	320	428	1130	124	1010	162	49	29	16	12	43	1300
20	255	347	1800	385	1090	143	52	27	14	12	43	1450
21	270	304	967	322	925	123	130	25	13	12	41	854
22	200	294	657	380	713	214	276	22	13	12	40	531
23	198	469	483	341	503	138	453	20	13	12	38	417
24	176	406	403	288	402	115	382	19	12	11	44	973
25	158	376	343	245	327	91	202	18	0	17	680	2090
26	151	437	285	215	264	73	147	18	10	26	284	997
27	146	719	255	206	671	82	126	18	12	19	198	1040
28	138	500	279	491	812	75	105	42	22	19	157	709
29	155	424	240	692	502	161	84	46	21	26	123	523
30	1300		209	570	375	198	110	33	18	26	111	405
31	725		196		961		128	29		27		341

The above data, obtained from the automated U.S. Geological Survey database, have not received Director's approval and as such are provisional and subject to revision. The data are released on the condition that neither the USGS nor the United States Government may be held liable for any damages resulting from its use.





**APPENDIX D**

**DISSOLVED OXYGEN MONITORING LOGS**



(Instrument Calibrated to 2000 ft. MSL)

Date	INSTRUMENT CALIBRATION CAL. READINGS			DO MEASUREMENTS DOWNSTREAM OF WEIR			NO. UNITS GENERATING	TIMES OF GENERATION	SLUICE GATE POSITION	NON-OPERATING TAILRACE ELEVATION	OPERATING TAILRACE ELEV.
	TIME	TEMP °C	DO (mg/l)	TIME	TEMP °C	DO (mg/l)					
2008											
6/2	10:08	21.9	7.36	10:13	11.4	7.62	—	—	ALL OPEN	2023.3	—
6/2	14:19	24.1	7.79	14:28	10.9	8.86	2	14:00-19:00	ALL OPEN	2023.3	2026.4
6/3	13:30	25.0	7.67	13:32	12.7	9.66	2	12:00-23:45	ALL OPEN	2023.3	2026.2
6/4	11:52	24.3	7.76	11:54	13.4	9.61	2	05:45-24:00	ALL OPEN	—	2027.0
6/5	09:00	22.5	8.04	09:08	13.6	9.46	2	00:00-24:00	ALL OPEN	—	2028.1
6/6	09:18	24.6	7.72	09:26	13.9	9.69	2	00:00-24:00	ALL OPEN	—	2027.0
6/7	09:12	23.0	7.84	09:33	13.7	9.56	2	00:00-10:15	ALL OPEN	2023.1	2027.6
6/8	14:13	28.9	7.17	14:24	13.9	9.42	2	13:00-19:00	ALL OPEN	2022.9	2026.2
6/9	09:20	28.3	7.07	09:28	13.7	9.35	2	06:45-23:15	ALL OPEN	2022.6	2027.1
6/10	11:49	27.4	7.30	11:52	12.7	8.57	—	—	ALL OPEN	2022.5	—
6/10	12:45	26.9	7.40	12:47	13.9	9.81	2	12:00-16:00	ALL OPEN	2022.5	2027.3
6/11	10:37	26.6	7.42	10:40	12.2	7.94	—	—	ALL OPEN	2022.4	—
6/11	13:45	26.7	7.43	13:47	13.5	9.39	2	12:00-16:30	ALL OPEN	2022.4	2027.0
6/12	10:23	25.3	7.64	10:25	13.1	9.29	2	09:30-13:15	ALL OPEN	2022.2	2026.1
6/12	13:48	26.4	7.45	13:50	14.7	8.64	—	—	ALL OPEN	2022.2	—
6/13	10:26	29.4	7.24	10:38	12.8	9.44	—	—	ALL OPEN	2022.1	—
6/13	11:31	26.5	7.45	11:38	14.0	9.67	2	11:00-14:15	ALL OPEN	2022.1	2027.6
6/13	14:23	28.0	6.61	14:32	14.4	7.54	—	—	ALL OPEN	2022.1	—
6/16	10:23	21.7	7.99	10:31	11.9	7.43	—	—	ALL OPEN	2022.3	—
6/16	11:20	21.8	8.11	11:28	13.3	8.63	2	11:00-17:00	ALL OPEN	2022.3	2027.2
6/20	10:23	22.9	7.77	10:32	11.9	6.92	—	—	ALL OPEN	2022.1	—
6/20	11:24	19.8	8.47	11:31	14.0	8.46	2	11:00-14:00	ALL OPEN	2022.1	2028.0
6/20	14:15	21.6	8.20	14:26	14.5	7.37	—	—	ALL OPEN	2022.1	—
6/21	10:26	24.4	7.67	10:28	12.3	7.67	—	—	ALL OPEN	2022.1	—

DISSOLVED OXYGEN MONITORING LOG

(Instrument Calibrated to 2000 ft. MSL)

Date	INSTRUMENT CALIBRATION		DO MEASUREMENTS		NO. UNITS GENERATING	TIMES OF GENERATION	SLUICE GATE POSITION	NON-OPERATING TAILRACE ELEVATION	OPERATING TAILRACE ELEV.
	TIME	TEMP °C	DO (mg/l)	DOWNSTREAM OF WEIR					
	TIME	TEMP °C	DO (mg/l)	TIME	TEMP °C	DO (mg/l)			
2008									
6/21	11:28	24.6	7.73	11:30	14.5	8.77	ALL OPEN	2022.1	2027.6
6/21	14:29	24.4	7.77	14:31	15.8	7.77	ALL OPEN	2022.1	—
6/23	10:22	26.4	7.35	10:31	12.2	7.60	ALL OPEN	2022.2	—
6/23	11:21	20.5	7.78	11:28	13.9	7.76	ALL OPEN	2022.2	2027.6
6/23	14:29	25.6	7.59	14:36	14.3	7.33	ALL OPEN	2022.2	—
6/26	13:30	24.4	7.75	13:32	12.8	6.93	ALL OPEN	2021.9	—
6/26	14:29	24.5	7.73	14:31	13.8	8.25	ALL OPEN	2021.9	2026.8
6/27	10:30	26.5	7.45	10:32	12.6	7.12	ALL OPEN	2021.9	—
6/27	11:30	26.0	7.52	11:32	14.1	8.59	ALL OPEN	2021.9	2028.0
6/28	10:33	24.4	7.75	10:35	12.4	6.94	ALL OPEN	2021.9	—
6/28	11:25	23.0	7.95	11:28	14.6	8.42	ALL OPEN	2021.9	2028.0
6/28	14:26	25.0	7.67	14:28	14.8	7.13	ALL OPEN	2022.0	—
6/30	10:47	22.1	7.57	10:56	12.6	6.58	ALL OPEN	2022.4	—
6/30	11:27	20.4	6.69	11:34	14.5	6.22	ALL OPEN	2022.4	2028.1
6/30	14:23	22.2	7.81	14:29	15.1	6.55	ALL OPEN	2022.4	—
7/03	13:40	25.9	7.44	13:48	13.0	6.87	ALL OPEN	2022.1	—
7/04	10:30	21.6	8.17	10:32	12.8	6.69	ALL OPEN	2022.5	—
7/04	11:28	20.1	8.42	11:30	14.1	7.30	ALL OPEN	2022.5	2027.7
7/04	14:27	21.2	8.23	14:29	14.9	6.28	ALL OPEN	2022.8	—
7/05	10:28	22.1	8.09	10:31	12.6	6.26	ALL OPEN	2023.2	—
7/05	11:27	21.9	8.13	11:29	11.7	5.15	ALL OPEN	2023.2	2024.1
7/05	14:27	22.9	7.97	14:29	14.8	7.57	ALL OPEN	2023.2	2028.0
7/06	14:25	25.5	7.59	14:27	15.1	7.56	ALL OPEN	2022.8	2027.2
7/07	10:29	24.7	7.71	10:31	12.7	6.53	ALL OPEN	2022.6	—

(Instrument Calibrated to 2000 ft. MSL)

Date	INSTRUMENT CALIBRATION CAL. READINGS			DO MEASUREMENTS DOWNSTREAM OF WEIR			NO. UNITS GENERATING	TIMES OF GENERATION	SLUICE GATE POSITION	NON-OPERATING TAILRACE ELEVATION	OPERATING TAILRACE ELEV.
	TIME	TEMP °C	DO (mg/l)	TIME	TEMP °C	DO (mg/l)					
2008											
7/07	11:31	25.0	7.67	11:33	14.9	7.74	2	11:00-18:00	ALL OPEN	2022.6	2028.0
7/08	13:40	26.9	7.28	13:43	13.7	7.40	2	12:00-19:00	ALL OPEN	2023.2	2028.3
7/09	11:10	22.6	7.96	11:18	14.4	6.22	0	—	All open	2022.8	—
7/09	12:42	22.3	8.04	12:49	14.2	6.89	2	12:00-19:00	All OPEN	2022.8	2027.8
7/10	11:31	23.9	7.81	11:40	12.8	5.73	0	—	All open	2022.6	—
7/10	12:30	23.2	7.89	12:38	13.9	6.40	2	12:00-17:00	All OPEN	2022.6	2027.6
7/11	10:31	20.7	7.90	10:39	12.5	5.08	0	—	All open	2022.5	—
7/11	11:42	21.7	8.15	11:48	14.7	6.68	2	11:00-19:10	All OPEN	2022.5	2028.1
7/12	10:28	25.2	7.63	10:30	13.2	5.99	0	—	ALL OPEN	2022.2	—
7/12	11:28	25.8	7.66	11:30	15.1	7.05	2	11:00-14:00	ALL OPEN	2022.2	2028.0
7/12	14:29	26.6	7.44	14:31	15.8	5.66	0	—	ALL OPEN	2022.2	—
7/14	10:26	24.4	7.76	10:29	12.6	5.35	0	—	ALL OPEN	2022.1	—
7/14	11:28	23.6	7.88	11:30	14.9	6.78	2	11:00-18:00	ALL OPEN	2022.1	2028.0
7/16	11:27	24.3	7.77	11:29	12.9	5.70	0	—	ALL OPEN	2022.0	—
7/16	12:57	24.6	7.73	12:59	15.1	6.54	2	12:30-19:00	ALL OPEN	2022.0	2028.0
7/17	11:58	26.0	7.97	12:01	13.2	5.81	0	—	ALL OPEN	2021.9	2028.0
7/17	12:58	26.0	7.52	13:00	14.8	6.24	2	12:30-15:00	ALL OPEN	2021.9	2027.6
7/18	10:28	24.3	7.77	10:31	13.6	5.21	0	—	ALL OPEN	2021.9	—
7/18	11:27	24.8	7.70	11:30	14.8	6.04	2	11:00-18:00	ALL OPEN	2021.9	2028.0
7/19	10:21	27.5	7.14	10:33	12.9	5.19	0	—	All OPEN	2021.8	—
7/19	11:32	24.2	7.66	11:39	15.2	6.00	2	11:00-14:00	All OPEN	2021.8	2028.1
7/19	14:43	27.6	7.27	14:51	16.3	5.76	0	—	All OPEN	2021.8	—
7/20	12:02	27.7	7.26	12:11	12.9	5.18	0	—	2 closed open	2021.8	—
7/20	13:00	26.4	7.45	13:07	15.4	7.59	2	12:30-14:30	2 closed open	2021.8	2028.5

DISSOLVED OXYGEN MONITORING LOG

(Instrument Calibrated to 2000 ft. MSL)

Date	INSTRUMENT CALIBRATION		DO MEASUREMENTS			NO. UNITS GENERATING	TIMES OF GENERATION	SLUICE GATE POSITION	NON-OPERATING TAILRACE ELEVATION	OPERATING TAILRACE ELEV.
	TIME	TEMP °C	DO (mg/l)	TIME	TEMP °C					
2008										
7/20	14:40	27.9	7.25	14:50	15.4	5.04	0	2-closed 2-closed 2-closed	2021.8	—
7/21	10:28	25.4	7.61	10:31	13.2	4.91	0	2-closed 2-closed	2022.0	—
7/21	11:29	24.8	7.69	11:32	15.2	7.34	2	2-closed 2-closed	2022.0	2028.5
7/21	14:29	26.5	7.46	14:31	15.7	4.70	0	2-closed 2-closed	2022.3	—
7/22	13:29	23.2	7.93	13:33	14.0	4.72	0	2-closed 2-closed	2022.4	—
7/23	12:29	23.2	7.93	12:33	16.0	5.19	0	2-closed 2-closed	2023.2	—
7/23	13:28	22.9	7.98	13:30	14.7	6.67	2	2-closed 2-closed	2023.2	2028.4
7/24	12:27	22.4	8.04	12:29	15.7	5.65	0	2-closed 2-closed	2023.0	—
7/24	13:27	21.7	8.17	13:29	13.4	6.35	2	2-closed 2-closed	2023.0	2028.4
7/25	10:22	22.4	7.92	10:30	13.0	4.87	0	2-closed 2-closed	2022.5	—
7/25	11:39	20.7	8.29	11:48	15.9	6.80	2	2-closed 2-closed	2022.5	2028.5
7/26	09:32	22.9	7.85	09:40	13.2	4.21	0	2-closed 2-closed	2022.3	—
7/26	10:23	21.6	8.16	10:31	16.0	6.78	2	2-closed 2-closed	2022.3	2028.5
7/28	10:38	23.0	7.86	10:46	12.6	3.84	0	2-closed 2-closed	2022.1	—
7/28	11:31	21.3	8.03	11:37	15.6	6.95	2	2-closed 2-closed	2022.1	2028.5
7/28	14:20	28.2	6.87	14:29	16.1	3.98	0	2-closed 2-closed	2022.1	—
7/30	13:24	26.9	7.40	13:34	14.4	6.16	2	2-closed 2-closed	2022.0	2028.4
7/31	13:30	22.4	8.02	13:37	13.1	5.04	0	2-closed 2-closed	2022.4	—
7/31	14:27	22.9	7.50	14:36	14.4	6.17	2	2-closed 2-closed	2022.4	2028.4
8/01	10:20	25.0	7.22	10:28	13.0	4.23	0	2-closed 2-closed	2022.1	—
8/01	11:24	22.0	8.10	11:36	15.2	6.75	2	2-closed 2-closed	2022.1	2028.5
8/02	11:31	24.4	7.74	11:38	14.1	6.55	1	2-closed 2-closed	2022.4	2028.2
8/02	13:32	24.0	7.82	13:40	14.7	3.36	0	2-closed 2-closed	2022.4	—
8/03	10:16	23.5	7.73	10:30	16.4	6.71	2	2-closed 2-closed	2023.1	2028.5

(Instrument Calibrated to 2000 ft. MSL)

Date	INSTRUMENT CALIBRATION		DO MEASUREMENTS			NO. UNITS GENERATING	TIMES OF GENERATION	SLUICE GATE POSITION	NON-OPERATING TAILRACE ELEVATION	OPERATING TAILRACE ELEV.
	TIME	TEMP °C	DO (mg/l)	TIME	TEMP °C					
2008										
8-04	10:15	20.8	7.88	10:23	12.8	3.67	—	2-closed 2-6" open	2022.5	—
8-04	11:32	21.7	7.75	11:40	15.9	6.39	11:00-18:00	2-closed 2-6" open	2022.5	2028.5
8/05	12:29	22.9	7.87	12:31	13.2	4.05	—	2-closed 2-6" open	2022.3	—
8/05	13:30	22.1	8.10	13:32	14.9	6.12	13:00-19:00	2-closed 2-6" open	2022.3	2028.4
8/06	12:30	25.1	7.65	12:33	13.4	4.22	—	2-closed 2-6" open	2022.2	—
8/06	13:30	24.5	7.75	13:32	15.3	6.42	13:00-13:40	2-closed 2-6" open	2022.2	2028.4
8/07	13:03	25.4	7.28	13:15	15.2	6.45	12:00-19:00	2-closed 2-6" open	2022.4	2028.4
8/08	10:29	21.9	8.13	10:31	13.8	3.90	—	2-closed 2-6" open	2022.2	—
8/08	11:30	21.4	8.21	11:32	16.4	6.27	11:00-24:00	2-closed 2-6" open	2022.2	2028.5
8/09	09:48	21.3	7.54	09:57	16.8	3.90	—	2-closed 2-6" open	2022.1	—
8/09	10:21	20.7	8.73	10:29	16.8	6.16	10:00-14:00	2-closed 2-6" open	2022.1	2028.5
8/09	14:27	21.2	8.04	14:39	16.8	3.03	—	2-closed 2-6" open	2022.1	—
8/11	10:29	20.0	8.43	10:33	15.0	3.40	—	2-closed 2-6" open	2022.0	—
8/11	11:28	20.4	8.37	11:30	16.3	6.50	11:00-14:15	2-closed 2-6" open	2022.0	2028.4
8/11	14:45	21.0	8.28	14:47	17.3	3.21	—	2-closed 2-6" open	2022.0	—
8/14	12:36	22.2	7.74	12:45	13.0	4.16	—	2-closed 2-6" open	2021.8	—
8/14	13:34	21.7	7.95	13:41	16.3	6.01	13:00-18:00	2-closed 2-6" open	2021.8	2028.4
8/15	10:40	19.8	7.72	10:48	13.2	3.15	—	2-closed 2-6" open	2021.8	—
8/15	12:34	20.8	7.99	12:46	17.3	6.09	11:00-14:00	2-closed 2-6" open	2021.8	2028.5
8/15	14:23	21.4	8.21	14:32	17.5	3.63	—	2-closed 2-6" open	2021.8	—
8/16	10:29	20.2	8.40	10:32	13.5	3.60	—	2-closed 2-6" open	2021.8	—
8/16	11:30	20.5	8.35	11:32	17.4	6.64	11:00-14:00	2-closed 2-6" open	2021.8	2028.5
8/16	14:30	22.2	8.08	14:32	17.5	3.68	—	2-closed 2-6" open	2021.8	—
8/18	10:27	20.1	8.37	10:38	13.3	3.48	—	2-closed 2-6" open	2021.7	—

DISSOLVED OXYGEN MONITORING LOG

(Instrument Calibrated to 2000 ft. MSL)

Date	INSTRUMENT CALIBRATION		DO MEASUREMENTS			NO. UNITS GENERATING	TIMES OF GENERATION	SLUICE GATE POSITION	NON-OPERATING TAILRACE ELEVATION	OPERATING TAILRACE ELEV.	
	TIME	TEMP °C	DO (mg/l)	TIME	TEMP °C						DO (mg/l)
2008											
8-18	11:33	20.8	8.26	11:45	17.5	6.51	2	11:00-19:00	2-closed 2-6" OPEN	2021.7	2028.5
8-19	12:32	21.8	7.94	12:38	13.6	3.45	0	—	2-closed 2-6" OPEN	2021.7	—
8-19	13:36	22.6	7.98	13:43	16.4	6.13	2	13:00-19:15	2-closed 2-6" OPEN	2021.7	2028.4
8-21	14:17	24.0	7.73	14:24	18.1	7.00	2	13:30-18:00	2-closed 2-6" OPEN	2021.6	2028.5
8/22	10:46	22.0	8.09	10:48	14.0	3.70	0	—	2-closed 2-6" OPEN	2021.6	—
8/22	11:28	22.0	7.80	11:36	18.2	6.50	2	11:00-16:00	2-closed 2-6" OPEN	2021.6	2028.5
8/23	10:30	22.2	8.08	10:32	13.7	3.75	0	—	2-closed 2-6" OPEN	2021.6	—
8/23	11:30	22.3	7.93	11:33	18.0	6.62	2	11:00-14:00	2-closed 2-6" OPEN	2021.6	2028.5
8/23	14:32	24.5	7.75	14:35	18.6	4.39	0	—	2-closed 2-6" OPEN	2021.6	—
8/24	12:36	22.6	8.01	12:38	17.9	6.85	2	11:00-13:00	2-closed 2-6" OPEN	2021.6	2028.5
8/24	13:31	23.0	7.88	13:33	18.4	4.54	0	—	2-closed 2-6" OPEN	2021.8	—
8/25	10:30	23.8	7.84	10:33	13.6	6.35	0	—	2-closed 2-6" OPEN	2021.7	—
8/25	11:30	23.5	7.88	11:32	17.6	6.75	2	11:00-14:00	2-closed 2-6" OPEN	2021.7	2028.5
8/25	14:29	24.9	7.68	14:32	18.1	5.05	0	—	2-closed 2-6" OPEN	2021.8	—
8/29	10:44	22.3	8.06	10:51	13.9	3.26	0	—	2-closed 2-6" OPEN	2021.8	—
8/29	11:34	21.4	7.77	11:42	18.9	6.63	2	11:00-14:00	2-closed 2-6" OPEN	2021.8	2028.5
8/29	14:28	22.5	7.88	14:37	19.2	4.85	0	—	2-closed 2-6" OPEN	2021.8	—
8/30	10:30	20.2	8.28	10:33	13.7	3.59	0	—	2-closed 2-6" OPEN	2021.7	—
8/30	11:15	18.8	8.64	11:18	18.2	6.49	2	10:45-14:00	2-closed 2-6" OPEN	2021.7	2028.5
8/30	14:29	21.3	8.22	14:31	18.5	4.24	0	—	2-closed 2-6" OPEN	2021.8	—
9/01	09:24	19.2	8.27	09:38	13.9	3.16	0	—	2-closed 2-6" OPEN	2021.7	—
9/01	10:31	18.7	7.64	10:38	18.3	5.98	2	9:45-14:00	2-closed 2-6" OPEN	2021.7	2028.5
9/01	14:34	20.5	8.35	14:39	19.0	4.33	0	—	2-closed 2-6" OPEN	2021.7	—
9/03	13:34	22.6	7.83	13:40	14.4	4.38	0	—	2-closed 2-6" OPEN	2021.6	—



(Instrument Calibrated to 2000 ft. MSL)

Date	INSTRUMENT CALIBRATION		DO MEASUREMENTS		NO. UNITS GENERATING	TIMES OF GENERATION	SLUICE GATE POSITION	NON-OPERATING TAILRACE ELEVATION	OPERATING TAILRACE ELEV.
	TIME	TEMP °C	DO (mg/l)	DOWNSTREAM OF WEIR					
	TIME	TEMP °C	DO (mg/l)	TIME	TEMP °C	DO (mg/l)			
2008									
9/03	14:28	24.1	7.72	14:36	17.0	6.26	2-closed 2-6" open	2021.6	2028.5
9/05	09:30	19.9	8.47	09:32	14.3	5.74	2-closed 2-6" open	2021.6	—
9/05	10:32	19.9	8.46	10:40	18.7	6.65	2-closed 2-6" open	2021.6	2028.5
9/05	13:28	22.5	8.05	13:34	19.1	5.23	2-closed 2-6" open	2021.6	—
9/06	09:32	23.0	7.67	09:35	14.3	5.73	2-closed 2-6" open	2021.7	—
9/06	10:30	22.0	8.08	10:32	19.3	6.98	2-closed 2-6" open	2021.7	2028.5
9/06	13:29	24.2	7.79	13:31	19.5	6.06	2-closed 2-6" open	2021.7	—
9/08	11:43	21.5	8.19	11:45	18.6	6.62	2-closed 2-6" open	2021.7	2028.5
9/08	13:33	22.4	7.97	13:35	19.1	5.67	2-closed 2-6" open	2021.6	—
9/12	09:30	21.3	8.19	09:45	14.3	3.18	2-closed 2-6" open	2021.6	—
9/12	10:25	19.9	8.38	10:33	19.3	6.82	2-closed 2-6" open	2021.6	2028.5
9/12	13:30	21.9	8.11	13:38	19.4	4.72	2-closed 2-6" open	2021.7	—
9/13	09:15	25.8	7.47	09:30	14.4	2.94	2-closed 2-6" open	2022.1	—
9/13	10:36	21.6	7.50	10:43	18.6	6.01	2-closed 2-6" open	2022.1	2028.5
9/13	13:22	23.5	7.54	13:33	18.9	3.86	2-closed 2-6" open	2022.1	—
9/15	09:30	24.3	7.78	09:32	14.4	3.63	2-closed 2-6" open	2021.7	—
9/15	10:29	22.3	8.07	10:31	18.3	6.53	2-closed 2-6" open	2021.7	2028.5
9/15	13:29	24.0	7.81	13:32	18.3	3.60	2-closed 2-6" open	2021.7	—
9/16	09:42	21.3	8.22	09:45	14.9	3.31	2-closed 2-6" open	2021.7	—
9/16	10:30	20.2	8.40	10:32	18.6	6.90	2-closed 2-6" open	2021.7	2028.5
9/16	13:32	21.3	8.20	13:34	19.1	4.52	2-closed 2-6" open	2021.7	—
9/17	09:29	18.4	8.70	09:32	14.7	3.32	2-closed 2-6" open	2021.6	—
9/17	10:34	17.7	8.83	10:36	18.6	6.74	2-closed 2-6" open	2021.6	2028.5
9/17	14:29	21.0	8.27	14:31	19.2	4.71	2-closed 2-6" open	2021.6	—



**APPENDIX E**

**WATER APPROPRIATION AND USE PERMIT - GA1992S009(07)**





# MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230

410-537-3000 • 1-800-633-6101

Martin O'Malley  
Governor

Shari T. Wilson  
Secretary

Anthony G. Brown  
Lieutenant Governor

Robert M. Summers, Ph.D.  
Deputy Secretary

April 12, 2007

**CERTIFIED MAIL - 7002 2410 0005 5561**  
**Return Receipt Requested**

BROOKFIELD POWER PINEY & DEEP CREEK LLC  
C/O DAVID W. CULLIGAN, PE  
225 GREENFIELD PARKWAY SUITE 201  
LIVERPOOL, PA 13088

RE: State Water Appropriation  
Permit No. GA1992S009(07)  
Revision 07

Dear Mr. Culligan:

The previously mailed permit signed on March 30, 2007 was noted to have several typographical errors. The enclosed permit replaces the previous version, with the same effective date and sequence number. As before, the Brookfield Power is responsible for complying with all permit conditions.

Semi-annual Water Withdrawal Reports are required by this permit. Forms for making these reports will be mailed to you in June and December of each year.

If you have any questions, please contact this office at (410) 537-3590.

Sincerely,

JOHN W. GRACE  
Water Supply Program

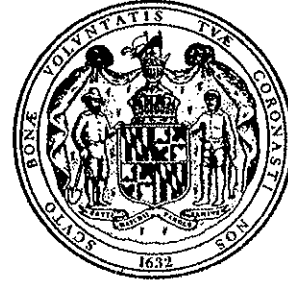
cc: GARRETT COUNTY HEALTH DEPARTMENT  
INTERESTED PARTY LIST

**STATE OF MARYLAND**  
**DEPARTMENT OF THE ENVIRONMENT**  
**WATER MANAGEMENT ADMINISTRATION**

**WATER APPROPRIATION AND USE PERMIT**

PERMIT NUMBER: GA1992S009(07)

EFFECTIVE DATE: APRIL 1, 2007  
EXPIRATION DATE: APRIL 1, 2019  
FIRST APPROPRIATION: JANUARY 1, 1925



BROOKFIELD POWER PINEY & DEEP CREEK LLC

HEREINAFTER REFERRED TO AS THE "PERMITTEE", IS AUTHORIZED BY THE WATER MANAGEMENT ADMINISTRATION, HEREINAFTER REFERRED TO AS THE "ADMINISTRATION" PURSUANT TO THE PROVISIONS OF TITLE 5 OF THE ENVIRONMENT ARTICLE, ANNOTATED CODE OF MARYLAND (1996 REPLACEMENT VOLUME) AS AMENDED, TO APPROPRIATE AND USE WATERS OF THE STATE SUBJECT TO THE FOLLOWING CONDITIONS:

1. ALLOCATION - THE WATER WITHDRAWAL GRANTED BY THIS PERMIT IS LIMITED TO:  
A DAILY AVERAGE OF 94,000,000 GALLONS ON A YEARLY BASIS AND A MAXIMUM DAILY WITHDRAWAL OF 420,000,000 GALLONS.
2. USE - THE WATER IS TO BE USED FOR HYDROELECTRIC GENERATION, TEMPERATURE ENHANCEMENT, WHITEWATER BOATING ENHANCEMENT, AND MAINTENANCE OF MINIMUM FLOWS IN THE YOUGHIOGHENY RIVER.
3. SOURCE - THE WATER SHALL BE TAKEN FROM DEEP CREEK LAKE.
4. LOCATION - THE POINT(S) OF WITHDRAWAL SHALL BE LOCATED AT THE EXISTING INTAKE STRUCTURE AT THE DEEP CREEK LAKE DAM, THREE MILES WEST OF THAYERVILLE, GARRETT COUNTY, MARYLAND.

CONTINUED ON PAGE 2

5. RIGHT OF ENTRY - THE PERMITTEE SHALL ALLOW AUTHORIZED REPRESENTATIVES OF THE ADMINISTRATION ACCESS TO THE PERMITTEE'S FACILITY TO CONDUCT INSPECTIONS AND EVALUATIONS NECESSARY TO ASSURE COMPLIANCE WITH THE CONDITIONS OF THIS PERMIT. THE PERMITTEE SHALL PROVIDE SUCH ASSISTANCE AS MAY BE NECESSARY TO EFFECTIVELY AND SAFELY CONDUCT SUCH INSPECTIONS AND EVALUATIONS.
6. PERMIT REVIEW - THE PERMITTEE WILL BE QUERIED EVERY THREE YEARS (TRIENNIAL REVIEW) REGARDING WATER USE UNDER THE TERMS AND CONDITIONS OF THIS PERMIT. FAILURE TO RETURN THE TRIENNIAL REVIEW QUERY WILL RESULT IN SUSPENSION OR REVOCATION OF THIS PERMIT.
7. PERMIT RENEWAL - THIS PERMIT WILL EXPIRE ON THE DATE INDICATED ON THE FIRST PAGE OF THIS PERMIT. IN ORDER TO RENEW THE PERMIT THE PERMITTEE SHALL FILE A RENEWAL APPLICATION WITH THE ADMINISTRATION NO LATER THAN 45 DAYS PRIOR TO THE EXPIRATION.
8. PERMIT SUSPENSION OR REVOCATION - THIS PERMIT MAY BE SUSPENDED OR REVOKED BY THE ADMINISTRATION UPON VIOLATION OF THE CONDITIONS OF THIS PERMIT, OR UPON VIOLATION OF ANY REGULATION PROMULGATED PURSUANT TO TITLE 5 OF THE ENVIRONMENT ARTICLE, ANNOTATED CODE OF MARYLAND (1996 REPLACEMENT VOLUME) AS AMENDED.
9. CHANGE OF OPERATIONS - ANY ANTICIPATED CHANGE IN APPROPRIATION WHICH MAY RESULT IN A NEW OR DIFFERENT USE, QUANTITY, SOURCE, OR PLACE OF USE OF WATER SHALL BE REPORTED TO THE ADMINISTRATION BY THE PERMITTEE BY SUBMISSION OF A NEW APPLICATION.
10. ADDITIONAL PERMIT CONDITIONS - THE ADMINISTRATION MAY AT ANYTIME (INCLUDING TRIENNIAL PERMIT REVIEW OR WHEN A CHANGE APPLICATION IS SUBMITTED) REVISE ANY CONDITION OF THIS PERMIT OR ADD ADDITIONAL CONDITIONS CONCERNING THE CHARACTER, AMOUNT, MEANS AND MANNER OF THE APPROPRIATION OR USE, WHICH MAY BE NECESSARY TO PROPERLY PROTECT, CONTROL AND MANAGE THE WATER RESOURCES OF THE STATE. CONDITION REVISIONS AND ADDITIONS WILL BE ACCOMPLISHED BY ISSUANCE OF A REVISED PERMIT.
11. NON-TRANSFERRABLE - THIS PERMIT IS NON-TRANSFERRABLE. A NEW OWNER MAY ACQUIRE AUTHORIZATION TO CONTINUE THIS APPROPRIATION BY FILING A NEW APPLICATION WITH THE ADMINISTRATION. AUTHORIZATION WILL BE ACCOMPLISHED BY ISSUANCE OF A NEW PERMIT.

12. FLOW MEASUREMENT - THE PERMITTEE SHALL MEASURE ALL WATER USED UNDER THIS PERMIT BY A METHOD WHICH SHALL BE APPROVED BY THE ADMINISTRATION. THE PERMITTEE SHALL MAINTAIN A DAILY LOG, SUBJECT TO INSPECTION BY AN AUTHORIZED REPRESENTATIVE OF THE ADMINISTRATION.
13. WITHDRAWAL REPORTS - THE PERMITTEE SHALL SUBMIT TO THE ADMINISTRATION, SEMI-ANNUALLY (JULY-DECEMBER, NO LATER THAN JANUARY 31 AND JANUARY-JUNE, NO LATER THAN JULY 31), WATER USE RECORDS. THESE RECORDS SHALL SHOW THE TOTAL QUANTITY OF WATER RELEASED EACH MONTH UNDER THIS PERMIT.
14. RULE BAND AND OPERATION PROTOCOLS - THE PERMITTEE SHALL OPERATE THE DEEP CREEK HYDROELECTRIC PROJECT (PROJECT) ACCORDING TO THE PROJECT OPERATING RULES SPECIFIED THROUGHOUT THIS PERMIT SUCH THAT WATER ELEVATIONS IN DEEP CREEK LAKE ARE MAINTAINED WITHIN THE OPERATING RULE BAND, EXCEPT IN THE EVENT OF UNUSUAL OR EMERGENCY CONDITIONS AS DEFINED BELOW. THE UPPER AND LOWER RULE BANDS ARE THE HIGHEST AND LOWEST DESIRABLE RESERVOIR LEVELS AT THE END OF EACH MONTH. THE UPPER AND LOWER END OF EACH MONTH ARE DEFINED IN THE FOLLOWING TABLE. WHEN LAKE LEVELS ARE ABOVE THE UPPER RULE BAND, THE PERMITTEE MAY RELEASE WATER AS NEEDED TO DRAW DOWN THE LAKE TO A LEVEL WITHIN THE RULE BAND. ELEVATIONS ARE GIVEN IN FEET ABOVE MEAN SEA LEVEL.

PROJECT OPERATING RULE BAND

MONTH	UPPER BAND ELEVATIONS	LOWER BAND ELEVATIONS
JANUARY	2457.9	2455.0
FEBRUARY	2457.9	2456.0
MARCH	2459.5	2458.0
APRIL	2461.0	2459.6
MAY	2461.0	2460.0
JUNE	2461.0	2460.0
JULY	2460.0	2459.0
AUGUST	2459.0	2458.0
SEPTEMBER	2458.5	2457.0
OCTOBER	2457.9	2456.0
NOVEMBER	2457.9	2455.0
DECEMBER	2457.9	2455.0

IN THE EVENT OF UNUSUAL OR EMERGENCY CONDITIONS, THE NORMAL MONTHLY OPERATING RULES MAY BE MODIFIED OR SUSPENDED UNTIL SUCH TIME AS UNUSUAL OR EMERGENCY CONDITIONS NO LONGER EXIST. UNUSUAL OR EMERGENCY CONDITIONS ARE DEFINED AS:



14. CONT'D

- (A) A SYSTEM EMERGENCY, DEFINED AS MAXIMUM EMERGENCY GENERATION UNDER THE PENNSYLVANIA-NEW JERSEY-MARYLAND INTERCONNECTION (PJM) HIERARCHY OF EMERGENCY ORDERS, OR EMERGENCY LOADING OF SPINNING RESERVE CAPACITY, OR EMERGENCY CONTROL OF TRANSMISSION FACILITY LOADING;
- (B) A SITE EMERGENCY SUCH AS FAILURE OR PROBABLE FAILURE OF THE DAM THAT REQUIRES MAXIMUM RELEASE FOR RAPID DRAWDOWN OF THE RESERVOIR;
- (C) A SITE EMERGENCY OR OTHER FORCED (UNSCHEDULED) OUTAGE REQUIRING SHUTDOWN OF THE INTAKE, POWER TUNNEL, PENSTOCKS, OR GENERATING UNITS, RESULTING IN THE INABILITY TO GENERATE OR TO OPERATE THE PROPOSED MINIMUM RELEASE BYPASS;
- (D) MAINTENANCE OF THE DAM OR REPAIR OF LAKE SHORELINE EROSION WHICH REQUIRES LOWERING OF LAKE LEVEL BELOW THE LOWER RULE BAND TO ALLOW ACCESS OR TO CONTROL INFLOW;
- (E) ACTUAL OR FORECAST EXTRAORDINARILY HIGH RUNOFF OR RAINFALL WHICH REQUIRES UNLIMITED GENERATION IN ORDER TO KEEP THE LAKE LEVEL BELOW THE UPPER RULE BAND AND/OR AVOID SPILLING OVER THE TOP OF THE DAM.

THE DURATION AND TIMING OF PLANNED OUTAGES SHALL BE APPROVED IN ADVANCE BY THE ADMINISTRATION. IN PROPOSING PLANNED OUTAGES, THE PERMITTEE SHALL DETAIL REASONS WHY THE OUTAGE IS NECESSARY AS WELL AS HOW THE OUTAGE WILL IMPACT THE FISHERY AND WHITEWATER RECREATION IN THE YOUGHIOGHENY RIVER. TO THE EXTENT POSSIBLE, PLANNED OUTAGES SHALL NOT OCCUR DURING MID-APRIL THROUGH MID-OCTOBER.

- 15. LAKE LEVEL MONITORING AND REPORTING - THE PERMITTEE SHALL MEASURE AND RECORD THE WATER ELEVATIONS IN THE DEEP CREEK LAKE AT APPROXIMATELY THE SAME TIME EACH DAY. THE PERMITTEE SHALL REPORT THE RESULTS OF WATER-LEVEL MONITORING TO THE ADMINISTRATION ON AN ANNUAL BASIS, AND SHALL MAINTAIN A DAILY LOG OF MEASUREMENTS, SUBJECT TO INSPECTION BY THE ADMINISTRATION.
- 16. TEMPERATURE ENHANCEMENT IN THE YOUGHIOGHENY RIVER - THE PERMITTEE SHALL IMPLEMENT A PLAN APPROVED BY THE DEPARTMENT FOR USING PROJECT OPERATION, OR A COMBINATION OF MINIMUM FLOW RELEASES AND PROJECT OPERATION, TO MAINTAIN WATER TEMPERATURES LESS THAN 25 DEGREES C IN THE YOUGHIOGHENY RIVER BETWEEN THE PROJECT TAILRACE AND SANG RUN, DURING THE MONTHS OF JUNE, JULY

16. CONT'D  
AND AUGUST. THE PLAN MUST INCLUDE A TRIGGERING MECHANISM AND REAL-TIME MONITORING OF RIVER TEMPERATURE. THE PLAN MUST INCLUDE A PROTOCOL FOR PREDICTING TEMPERATURE RELEASES ON THE MORNING OF THE RELEASE, AS EARLY AS THREE HOURS IN ADVANCE. THE PERMITTEE SHALL REPORT TO THE DEPARTMENT ALL OCCURRENCES OF WATER TEMPERATURES EQUALING OR EXCEEDING 25 DEGREES C WITHIN 30 DAYS OF THE DATE OF OCCURRENCE, INCLUDING PROPOSED MEASURES OR CHANGES TO THE PLAN TO PRECLUDE FUTURE INCIDENTS WHERE WATER TEMPERATURE EQUALS OR EXCEEDS 25 DEGREES C. THE PERMITTEE SHALL INCLUDE THE RESULTS OF TEMPERATURE MONITORING IN AN ANNUAL REPORT. THE PERMITTEE SHALL, IN CONSULTATION WITH THE DEPARTMENT, CONTINUE TO REFINE OR REVISE THE PLAN WITH THE OBJECTIVE OF MAINTAINING WATER TEMPERATURES IN THE RIVER BETWEEN THE PROJECT TAILRACE AND SANG RUN BELOW 25 DEGREES C AT ALL TIMES DURING THE MONTHS OF JUNE, JULY AND AUGUST.
17. MINIMUM FLOW RELEASES - THE PERMITTEE SHALL MAINTAIN AND OPERATE A BYPASS SYSTEM AT THE PROJECT TO MAINTAIN A MINIMUM FLOW OF 40 CFS IN THE YOUGHIOGHENY RIVER DOWNSTREAM OF THE PROJECT TAILRACE. THE MINIMUM FLOW SHALL BE MAINTAINED AT ALL TIMES BELOW THE TAILRACE. A REDUCTION IN THE MINIMUM FLOW BELOW 40 CFS MAY BE REQUESTED OF THE ADMINISTRATION WHEN RESERVOIR LEVELS ARE ONE FOOT OR MORE BELOW THE LOWER RULE BAND. THE PERMITTEE SHALL ESTIMATE FLOW IN THE YOUGHIOGHENY RIVER IMMEDIATELY BELOW THE TAILRACE AT APPROXIMATELY THE SAME TIME EACH DAY. A REPORT OF FLOW ESTIMATES AND THE OCCURRENCE OF BYPASS RELEASES SHALL BE SUBMITTED TO THE DEPARTMENT IN AN ANNUAL REPORT, AND A DAILY LOG OF SUCH RELEASES SHALL BE MAINTAINED, SUBJECT TO INSPECTION BY AN AUTHORIZED REPRESENTATIVE OF THE ADMINISTRATION. THE PERMITTEE SHALL PROVIDE A CONTINUOUS FLOW INTO THE TAILRACE OF APPROXIMATELY 9 CFS DURING THE MONTHS OF JUNE, JULY AND AUGUST, EVEN WHEN THERE IS NO MINIMUM BYPASS FLOW AS REQUIRED BY THIS CONDITION.
18. DISSOLVED OXYGEN MITIGATION - THE PERMITTEE SHALL MAINTAIN AND OPERATE A TAILRACE WEIR DESIGNED TO INCREASE DISSOLVED OXYGEN LEVELS IN ALL PROJECT DISCHARGES ABOVE MARYLAND WATER QUALITY STANDARDS AS OUTLINED IN COMAR 26.08.02 (5 PPM MINIMUM, 6 PPM DAILY AVERAGE). THE PERMITTEE SHALL MONITOR DISSOLVED OXYGEN LEVELS OF PROJECT DISCHARGES BY A METHOD APPROVED BY THE ADMINISTRATION DURING JUNE 1 TO OCTOBER 1. THE RESULTS OF DISSOLVED OXYGEN MONITORING SHALL BE SUBMITTED TO THE DEPARTMENT IN AN ANNUAL REPORT. THE PERMITTEE SHALL MAINTAIN A LOG OF MEASUREMENTS, SUBJECT TO INSPECTION BY AN AUTHORIZED REPRESENTATIVE OF THE ADMINISTRATION.

19. RELEASES FOR WHITEWATER RECREATION

A) WHITEWATER RELEASES. THERE ARE TWO TYPES OF SCHEDULED WHITEWATER RELEASES (WWR); STANDARD AND SPECIAL RELEASES. ALL WWR ARE SUBJECT TO THE RULE BAND AND OPERATION REQUIREMENTS IN CONDITION 14, THE TEMPERATURE ENHANCEMENT RELEASE (TER) REQUIREMENTS IN CONDITION 16 AND THE PARAMETERS DEFINED BELOW IN PARAGRAPH B. THE INTENT OF WWR IS TO ENHANCE RECREATIONAL WHITEWATER ENJOYMENT FROM THE PROJECT TAILRACE TO FRIENDSVILLE.

I) STANDARD WWR. WITH THE EXCEPTION OF THE SPECIAL WWR CONDITIONS IN PARAGRAPH II) BELOW, STANDARD WWR WILL OCCUR ON SUNDAYS, MONDAYS, FRIDAYS, AND SATURDAYS BETWEEN APRIL 15TH AND OCTOBER 15TH IN ACCORDANCE WITH THE FOLLOWING TABLE AND MAY BE MODIFIED BY ITEMS II) AND III) BELOW.

<u>MONTH</u>	<u>SUNDAY</u>	<u>MONDAY</u>	<u>FRIDAY</u>	<u>SATURDAY</u>
APRIL	NONE	NONE	ALL FRIDAYS AFTER APRIL 14TH (1000 HR TO 1300 HR)	NONE
MAY	NONE	1ST TWO MONDAYS (1000 HR TO 1300 HR)	1ST THREE FRIDAYS (1000 HR TO 1300 HR)	1ST SATURDAY (1000 HR TO 1300 HR)
MEMORIAL DAY WEEKEND	ODD NUMBERED YEARS (1000 HR TO 1300 HR)	ODD NUMBERED YEARS (1000 HR TO 1300 HR)	EVEN NUMBERED YEARS (1000 HR TO 1300 HR)	EVEN NUMBERED YEARS (1000 HR TO 1300 HR)
JUNE	NONE	EVERY MONDAY (1100 HR TO 1400 HR)	EVERY FRIDAY (1100 HR TO 1400 HR)	LAST TWO SATURDAYS (1100 HR TO 1400 HR)
JULY	NONE	EVERY MONDAY (1100 HR TO 1400 HR)	EVERY FRIDAY (1100 HR TO 1400 HR)	EVERY SATURDAY (1100 HR TO 1400 HR) (see also Special WWR below)
AUGUST	NONE	EVERY MONDAY (1100 HR TO 1400 HR)	EVERY FRIDAY (1100 HR TO 1400 HR)	EVERY SATURDAY (1100 HR TO 1400 HR)
SEPTEMBER	NONE	EVERY MONDAY (1000 HR TO 1300 HR)	EVERY FRIDAY (1000 HR TO 1300 HR)	FIRST TWO SATURDAYS (1000 HR TO 1300 HR)
OCTOBER	NONE	ALL MONDAYS BEFORE OCTOBER 16TH (1000 HR TO 1300 HR)	ALL FRIDAYS BEFORE OCTOBER 16TH (1000 HR TO 1300 HR)	FIRST SATURDAY (1000 HR TO 1300 HR)

II) SPECIAL WWR. SPECIAL WWR MUST BE REQUESTED IN WRITING TO MDE NO LATER THAN 30 CALENDAR DAYS BEFORE THE SPECIAL WWR AND WILL, AT A MINIMUM, INCLUDE:

- + ANNUAL TEAM FRIENDSVILLE UPPER YOUGH RACE WWR. THE FOURTH SATURDAY WWR IN JULY WILL BE AN EXTENDED SIX (6) HOUR CONTINUOUS RELEASE BETWEEN 1100 HOURS AND 1700 HOURS TO ACCOMMODATE THE ANNUAL TEAM FRIENDSVILLE UPPER YOUGH RACE. THE ANNUAL TEAM FRIENDSVILLE UPPER YOUGH RACE WWR IS CONTINGENT ON THE LAKE LEVEL ELEVATION BEING HIGHER THAN THE ONE (1) FOOT BELOW THE LOWER RULE BAND ON THE DAY OF THE WWR.
- + GAULEY WEEK WWR. GAULEY WEEK RELEASES INCLUDE CONTINUOUS THREE (3) HOUR RELEASES FROM 1000 HOURS TO 1300 HOURS ON TUESDAY, WEDNESDAY, AND THURSDAY OF THE WEEK BEFORE THE GAULEY FESTIVAL WEEKEND IN SUMMERSVILLE, WEST VIRGINIA. THE GAULEY FESTIVAL WEEKEND IS TYPICALLY SCHEDULED DURING THE SECOND HALF OF SEPTEMBER. EACH DAY OF THE GAULEY WEEK WWR IS CONTINGENT ON THE LAKE LEVEL ELEVATION BEING HIGHER THAN THE LOWER RULE BAND.

III) SYNCHRONIZATION OF WWR WITH TER. THE EXTENT PRACTICABLE AND AT THE DISCRETION OF THE PERMITTEE, ANY WWR MAY BE SYNCHRONIZED WITH ANY TER THAT MAY BE REQUIRED DURING THE MONTHS OF JUNE, JULY, AND AUGUST. SYNCHRONIZATION MEANS COMMENCING A WWR UP TO ONE (1) HOUR EARLIER TO MORE ACCURATELY COINCIDE WITH A TER. IN THE EVENT THE PERMITTEE EXPECTS TO SYNCHRONIZE A WWR WITH A TER ON A GIVEN DAY, IT SHALL PLACE NOTICE OF THE SAME ON A RECORDED MESSAGE, ACCESSIBLE TO THE PUBLIC BY TELEPHONE AS SOON AS THE DECISION TO SYNCHRONIZE IS MADE.

B) FROM APRIL 15TH THROUGH OCTOBER 15TH, THE FOLLOWING ADDITIONAL OPERATING RULES WILL ALSO BE IN EFFECT:

- I) THE PERMITTEE SHALL NOT OPERATE THE PROJECT FOR HYDROELECTRIC GENERATION BEFORE 1300 HOURS WHEN NATURAL FLOWS AS MEASURED AT FRIENDSVILLE USGS GAGE 03076500 (FRIENDSVILLE) ARE BETWEEN 1300 AND 2500 CFS UNLESS AN UNUSUAL OR EMERGENCY CONDITION EXISTS, OR LAKE EXCEEDS THE UPPER RULE BAND.

- II) WHEN NATURAL FLOWS AS MEASURED AT FRIENDSVILLE ARE GREATER THAN 600, BUT LESS THAN 1300 CFS, AND LAKE ELEVATION IS WITHIN THE RULE BANDS SPECIFIED IN CONDITION 14, POWERHOUSE DISCHARGE SHALL BE NO GREATER THAN THE MAXIMUM DISCHARGE OF ONE TURBINE FOR THE FIRST THREE (3) HOURS OF SCHEDULED GENERATION.
- III) DURING WEEKS THAT CONTAIN A SATURDAY RELEASE, THE PERMITTEE SHALL MAKE RELEASES ON SATURDAYS WHEN THE LAKE LEVEL IS HIGHER THAN ELEVATION THAT IS ONE FOOT BELOW THE LOWER RULE BAND, AND ON SUNDAYS, MONDAYS AND FRIDAYS WHEN THE LAKE LEVEL IS ABOVE THE LOWER RULE BAND.
- IV) DURING WEEKS THAT DO NOT CONTAIN A SATURDAY RELEASE, THE PERMITTEE SHALL MAKE RELEASES ON FRIDAYS WHEN THE LAKE LEVEL IS HIGHER THAN AN ELEVATION THAT IS ONE FOOT BELOW THE LOWER RULE BAND, AND ON SUNDAYS AND MONDAYS WHEN THE LAKE LEVEL IS ABOVE THE LOWER RULE BAND.
- V) THE PERMITTEE MAY VARY POWERHOUSE DISCHARGE DURING ANY WWR IN ACCORDANCE WITH EITHER OF THE FOLLOWING TWO APPROACHES EXCEPT DURING THE ANNUAL TEAM FRIENDSVILLE UPPER YOUGH RACE WWR AND EXCEPT WHEN A WWR IS SYNCHRONIZED WITH A TER.

(1) 3RD HOUR REGULATION APPROACH

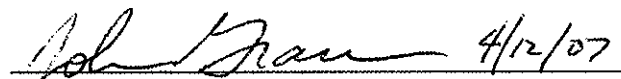
- + WHEN NATURAL FLOW AS MEASURED AT FRIENDSVILLE IS LESS THAN 600 CFS, POWERHOUSE DISCHARGE MAY VARY BETWEEN 320 CFS AND MAXIMUM DISCHARGE OF TWO TURBINES DURING THE THIRD HOUR OF ANY WWR SO LONG AS POWERHOUSE DISCHARGE DURING THE FIRST TWO HOURS OF THE WWR IS HELD CONSTANT AT MAXIMUM DISCHARGE OF TWO TURBINES.
- + WHEN NATURAL FLOW AS MEASURED AT FRIENDSVILLE IS GREATER THAN 600 CFS BUT LESS THAN 1300 CFS, POWERHOUSE DISCHARGE MAY VARY BETWEEN 220 CFS AND MAXIMUM DISCHARGE OF ONE TURBINE DURING THE THIRD HOUR OF ANY WWR SO LONG AS POWER HOUSE DISCHARGE DURING THE FIRST TWO HOURS OF THE WWR IS HELD CONSTANT AT MAXIMUM DISCHARGE OF ONE TURBINE.

(2) ALL HOUR REGULATION APPROACH.

- + WHEN NATURAL FLOW AS MEASURED AT FRIENDSVILLE IS LESS THAN OR EQUAL TO 200 CFS, POWERHOUSE DISCHARGE WILL BE HELD CONSTANT AT MAXIMUM DISCHARGE OF TWO TURBINES FOR ALL THREE HOURS OF ANY WWR.
  - + WHEN NATURAL FLOW AS MEASURED AT FRIENDSVILLE IS BETWEEN 200 AND 300 CFS, POWERHOUSE DISCHARGE MAY VARY BETWEEN 440 CFS AND MAXIMUM DISCHARGE OF TWO TURBINES DURING ANY PART OF ANY THREE HOUR WWR.
  - + WHEN NATURAL FLOW AS MEASURED AT FRIENDSVILLE IS BETWEEN 300 AND 600 CFS, POWERHOUSE DISCHARGE MAY VARY BETWEEN 320 AND MAXIMUM DISCHARGE OF TWO TURBINES DURING ANY PART OF ANY THREE HOUR WWR.
  - + WHEN NATURAL FLOW AS MEASURED AT FRIENDSVILLE IS GREATER THAN 600 CFS BUT LESS THAN 1300 CFS, POWERHOUSE DISCHARGE MAY VARY BETWEEN 220 CFS AND MAXIMUM DISCHARGE OF ONE TURBINE DURING ANY PART OF ANY THREE HOUR WWR.
20. ANNOUNCEMENT OF EXPECTED RELEASES - ON EACH THURSDAY, THE PERMITTEE SHALL PLACE ON A RECORDED MESSAGE ACCESSIBLE TO THE PUBLIC BY TELEPHONE, A FORECAST OF EXPECTED RELEASES FOR THE FOLLOWING WEEK. EACH MORNING, BETWEEN 0700 AND 0800 HOURS, THE PERMITTEE SHALL PLACE ON THE RECORDED MESSAGE INFORMATION ON THE SCHEDULED RELEASES FOR THE NEXT 48 HOURS.
21. ZEBRA MUSSEL MONITORING - THE PERMITTEE SHALL IMPLEMENT A ZEBRA MUSSEL (*DREISSENA POLYMORPHA*) MONITORING PROGRAM APPROVED BY THE ADMINISTRATION. THE RESULTS OF SUCH MONITORING SHALL BE SUBMITTED IN AN ANNUAL REPORT.
22. NOTICE OF GENERATION RELEASES - AT STRATEGIC LOCATIONS, SELECTED IN CONSULTATION WITH THE ADMINISTRATION AND INCLUDING THE SANG RUN AND HOYES RUN ACCESS AREAS, THE PERMITTEE SHALL PROMINENTLY DISPLAY WARNING NOTICES REGARDING THE HAZARD OF RAPID WATER LEVEL FLUCTUATIONS ASSOCIATED WITH WATER RELEASES FROM DEEP CREEK LAKE.

23. ANNUAL REPORT - THE PERMITTEE SHALL SUBMIT AN ANNUAL REPORT TO THE ADMINISTRATION NO LATER THAN JANUARY 31 OF EACH YEAR. THE REPORT SHALL INCLUDE THE FOLLOWING DATA FOR THE PREVIOUS CALENDAR YEAR:
- A) LAKE LEVEL MONITORING (CONDITION 15);
  - B) TEMPERATURE MONITORING (CONDITION 16);
  - C) MINIMUM FLOW RELEASE MONITORING (CONDITION 17);
  - D) DISSOLVED OXYGEN MONITORING (CONDITION 18);
  - E) RELEASES UNSUITABLE FOR WHITEWATER RECREATION (CONDITION 19);
  - F) ZEBRA MUSSEL MONITORING (CONDITION 21).
24. PERMIT SUPERSESSION - THIS PERMIT HAS BEEN REVIEWED AND REVISED AND SUPERSEDES THE APPROPRIATION AND USE GRANTED BY THE FOLLOWING PRIOR PERMIT ISSUED TO:  
BRASCAN POWER PINEY AND DEEP CREEK LLC ON APRIL 27, 2005  
(GA1992S009(06))

BY AUTHORITY OF THE DIRECTOR  
WATER MANAGEMENT ADMINISTRATION

  
\_\_\_\_\_  
John W. Grace, Chief  
SOURCE PROTECTION AND APPROPRIATION DIV





**APPENDIX F**

**ZEBRA MUSSEL MONITORING REPORTS**





# Zebra Mussel Monitoring Report

(official use only - leave blank)  
ZM Monitoring Network #:

- 1.) RANDY GARLETT  
(COLLECTOR'S NAME)
- 2.) BROOKFIELD RENEWABLE POWER 3.) 301-387-6616  
(COMPANY OR AFFILIATION) (PHONE NUMBER)
- 4.) 14 RIVER VIEW TERRACE, OAKLAND, MD 21550  
(ADDRESS)
- 5.) DEEP CREEK STATION  
(NAME OF STATION)

## Physical / Chemical / and Biological Data

- 6.) \_\_\_\_\_ 7.) \_\_\_\_\_ 8.) \_\_\_\_\_  
(STATION LATITUDE) (STATION LONGITUDE) (RIVER MILE INDEX)

### 9.) Date and time this data was collected (circle year, month, day, & hour)

Year: '98 '99 '00 '01 '08

Month: 01 02 03 04 (05) 06 07 08 09 10 11 12

Day: 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 (19) 20 21 22 23 24 25 26 27 28 29 30 31

Hour: \_\_\_\_\_ (if before 7am) 07 08 09 10 11 12 (noon) 13 (1pm) (14) 2pm 15 (3pm) 16 (4pm) 17 18 \_\_\_\_\_ (if after 6pm)

- 10.) 49° F 11.) \_\_\_\_\_ 12.) \_\_\_\_\_ 13.) \_\_\_\_\_  
(TEMPERATURE °F) (pH) (DISSOLVED OXYGEN mg/l) (CONDUCTIVITY umhos/cm<sup>2</sup>)
- 14.) \_\_\_\_\_ 15.) \_\_\_\_\_ 16.) \_\_\_\_\_ 17.) \_\_\_\_\_  
(TOTAL CALCIUM mg/l) (SECCHI DEPTH meters) (CURRENT VELOCITY meters/sec) (WATER DEPTH meters)

- 18.) How far above the natural substrate is the sampler? (in meters) \_\_\_\_\_
- 19.) How many days was the sampler exposed to the water prior to collecting this data? 19
- 20.) Are zebra mussels present at this site? ( NO) ( YES) - if yes, comment below and notify the Zebra Mussel Monitoring Coordinator Immediately.
- 21.) Other organisms observed on the sampler / site? (please list) \_\_\_\_\_

- 22.) Comments (if more space is needed, continue on the back of this form): \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_



## Zebra Mussel Monitoring Report

(official use only - leave blank)  
ZM Monitoring Network #:

- 1.) Mike Stemple  
(COLLECTOR'S NAME)
- 2.) Brook Field Renewable Power 3.) 301-387-6616  
(COMPANY OR AFFILIATION) (PHONE NUMBER)
- 4.) 14 River View Terrace Oakland MD 21550  
(ADDRESS)
- 5.) Deep Creek Power Plant  
(NAME OF STATION)

### Physical / Chemical / and Biological Data

- 6.) \_\_\_\_\_ 7.) \_\_\_\_\_ 8.) \_\_\_\_\_  
(STATION LATITUDE) (STATION LONGITUDE) (RIVER MILE INDEX)

9.) **Date and time this data was collected (circle year, month, day, & hour)**

Year: '98 '99 '00 '01 '08  
Month: 01 02 03 04 05 06 07 08 09 10 11 12  
Day: 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31  
Hour: 6:30 (if before 7am) 07 08 09 10 11 12 (noon) 13 (1pm) 14 (2pm) 15 (3pm) 16 (4pm) 17 18 \_\_\_\_\_ (if after 6pm)  
*AM*

- 10.) 63°F 11.) \_\_\_\_\_ 12.) \_\_\_\_\_ 13.) \_\_\_\_\_  
(TEMPERATURE °C) (pH) (DISSOLVED OXYGEN mg/l) (CONDUCTIVITY umhos/cm<sup>2</sup>)
- 14.) \_\_\_\_\_ 15.) \_\_\_\_\_ 16.) \_\_\_\_\_ 17.) \_\_\_\_\_  
(TOTAL CALCIUM mg/l) (SECCHI DEPTH meters) (CURRENT VELOCITY meters/sec) (WATER DEPTH meters)

- 18.) How far above the natural substrate is the sampler? (in meters) \_\_\_\_\_
- 19.) How many days was the sampler exposed to the water prior to collecting this data? 40
- 20.) Are zebra mussels present at this site? ( NO) ( YES) - if yes, comment below and notify the Zebra Mussel Monitoring Coordinator immediately.
- 21.) Other organisms observed on the sampler / site? (please list) NONE

22.) Comments (if more space is needed, continue on the back of this form): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



# Zebra Mussel Monitoring Report

(official use only - leave blank)  
ZM Monitoring Network #.

- 1.) RANDY GARLETTS  
(COLLECTOR'S NAME)
- 2.) BROOKFIELD RENEWABLE POWER  
(COMPANY OR AFFILIATION)
- 3.) 301-387-6616  
(PHONE NUMBER)
- 4.) 14 RIVER VIEW TERRACE OAKLAND, MD 21550  
(ADDRESS)
- 5.) DEEP CREEK  
(NAME OF STATION)

## Physical / Chemical / and Biological Data

- 6.) \_\_\_\_\_ 7.) \_\_\_\_\_ 8.) \_\_\_\_\_  
(STATION LATITUDE) (STATION LONGITUDE) (RIVER MILE INDEX)

9.) Date and time this data was collected (circle year, month, day, & hour)

Year: '98 '99 '00 '01 (08)  
Month: 01 02 03 04 05 06 (07) 08 09 10 11 12  
Day: 01 02 03 04 05 06 07 08 09 10 (11) 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31  
Hour: \_\_\_\_\_ (if before 7am) 07 08 09 10 11 12 (noon) 13 (1pm) (14 (2pm)) 15 (3pm) 16 (4pm) 17 18 \_\_\_\_\_ (if after 6pm)

- 10.) 81°F 11.) \_\_\_\_\_ 12.) \_\_\_\_\_ 13.) \_\_\_\_\_  
(TEMPERATURE °C) (pH) (DISSOLVED OXYGEN mg/l) (CONDUCTIVITY umhos/cm<sup>3</sup>)
- 14.) \_\_\_\_\_ 15.) \_\_\_\_\_ 16.) \_\_\_\_\_ 17.) \_\_\_\_\_  
(TOTAL CALCIUM mg/l) (SECCHI DEPTH meters) (CURRENT VELOCITY meters/sec) (WATER DEPTH meters)

- 18.) How far above the natural substrate is the sampler? (in meters) \_\_\_\_\_
- 19.) How many days was the sampler exposed to the water prior to collecting this data? 72
- 20.) Are zebra mussels present at this site? ( NO) ( YES) - if yes, comment below and notify the Zebra Mussel Monitoring Coordinator immediately.
- 21.) Other organisms observed on the sampler / site? (please list) NONE

- 22.) Comments (if more space is needed, continue on the back of this form): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



# Zebra Mussel Monitoring Report

(official use only - leave blank)  
ZM Monitoring Network #:

1.) Mike Stemple  
(COLLECTOR'S NAME)

2.) Brookfield Renewable Power  
(COMPANY OR AFFILIATION)

3.) 301-387-6616  
(PHONE NUMBER)

4.) 14 River View Terrace Oakland MD 21550  
(ADDRESS)

5.) Deep Creek  
(NAME OF STATION)

## Physical / Chemical / and Biological Data

6.) \_\_\_\_\_ 7.) \_\_\_\_\_ 8.) \_\_\_\_\_  
(STATION LATITUDE) (STATION LONGITUDE) (RIVER MILE INDEX)

9.) Date and time this data was collected (circle year, month, day, & hour)

Year: '98 '99 '00 '01 '08  
Month: 01 02 03 04 05 06 07 08 09 10 11 12  
Day: 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31  
Hour: \_\_\_\_\_ (if before 7am) 07 08 09 10 11 12 (noon) 13 (1pm) 14 (2pm) 15 (3pm) 16 (4pm) 17 18 \_\_\_\_\_ (if after 6pm)

10.) 71°F 11.) \_\_\_\_\_ 12.) \_\_\_\_\_ 13.) \_\_\_\_\_  
(TEMPERATURE °C) (pH) (DISSOLVED OXYGEN mg/l) (CONDUCTIVITY umhos/cm)  
14.) \_\_\_\_\_ 15.) \_\_\_\_\_ 16.) \_\_\_\_\_ 17.) \_\_\_\_\_  
(TOTAL CALCIUM mg/l) (SECCHI DEPTH meters) (CURRENT VELOCITY meters/sec) (WATER DEPTH meters)

18.) How far above the natural substrate is the sampler? (in meters) \_\_\_\_\_

19.) How many days was the sampler exposed to the water prior to collecting this data? 95

20.) Are zebra mussels present at this site? ( NO) ( YES) - if yes, comment below and notify the Zebra Mussel Monitoring Coordinator immediately.

21.) Other organisms observed on the sampler / site? (please list) NONE

22.) Comments (if more space is needed, continue on the back of this form): \_\_\_\_\_



# Zebra Mussel Monitoring Report

(official use only - leave blank)  
ZM Monitoring Network #:

- 1.) Mike Stemple  
(COLLECTOR'S NAME)
- 2.) Brookfield Renewable Power 3.) 301-387-6616  
(COMPANY OR AFFILIATION) (PHONE NUMBER)
- 4.) 14 River View Terrace Oakland MD 21550  
(ADDRESS)
- 5.) Deep Creek  
(NAME OF STATION)

## Physical / Chemical / and Biological Data

- 6.) \_\_\_\_\_ 7.) \_\_\_\_\_ 8.) \_\_\_\_\_  
(STATION LATITUDE) (STATION LONGITUDE) (RIVER MILE INDEX)

9.) **Date and time this data was collected (circle year, month, day, & hour)**

Year: '98 '99 '00 '01 '08

Month: 01 02 03 04 05 06 07 08 09 10 11 12

Day: 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Hour: \_\_\_\_\_ (if before 7am) 07 08 09 10 11 12 (noon) 13 (1pm) 14 (2pm) 15 (3pm) 16 (4pm) 17 18 \_\_\_\_\_ (if after 6pm)

- 10.) 72°F 11.) \_\_\_\_\_ 12.) \_\_\_\_\_ 13.) \_\_\_\_\_  
(TEMPERATURE °C) (pH) (DISSOLVED OXYGEN mg/l) (CONDUCTIVITY umhos/cm<sup>3</sup>)
- 14.) \_\_\_\_\_ 15.) \_\_\_\_\_ 16.) \_\_\_\_\_ 17.) \_\_\_\_\_  
(TOTAL CALCIUM mg/l) (SECCHI DEPTH meters) (CURRENT VELOCITY meters/sec) (WATER DEPTH meters)

- 18.) How far above the natural substrate is the sampler? (in meters) \_\_\_\_\_
- 19.) How many days was the sampler exposed to the water prior to collecting this data? 125
- 20.) Are zebra mussels present at this site? ( NO) ( YES) - if yes, comment below and notify the Zebra Mussel Monitoring Coordinator immediately.
- 21.) Other organisms observed on the sampler / site? (please list) \_\_\_\_\_

- 22.) Comments (if more space is needed, continue on the back of this form): \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_



# Zebra Mussel Monitoring Report

(official use only - leave blank)  
ZM Monitoring Network #:

- 1.) Mike Stemple  
(COLLECTOR'S NAME)
- 2.) Brookfield Renewable Power 3.) 301-387-6616  
(COMPANY OR AFFILIATION) (PHONE NUMBER)
- 4.) 14 River View Terrace Oakland MD 21550  
(ADDRESS)
- 5.) Deep Creek  
(NAME OF STATION)

## Physical / Chemical / and Biological Data

- 6.) \_\_\_\_\_ 7.) \_\_\_\_\_ 8.) \_\_\_\_\_  
(STATION LATITUDE) (STATION LONGITUDE) (RIVER MILE INDEX)

### 9.) Date and time this data was collected (circle year, month, day, & hour)

Year: '98 '99 '00 '01 '03  
 Month: 01 02 03 04 05 06 07 08 09 10 11 12  
 Day: 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31  
 Hour: \_\_\_\_\_ (if before 7am) 07 08 09 10 11 12 (noon) 13 (1pm) 14 (2pm) 15 (3pm) 16 (4pm) 17 18 \_\_\_\_\_ (if after 6pm)

- 10.) 64°F 11.) \_\_\_\_\_ 12.) \_\_\_\_\_ 13.) \_\_\_\_\_  
(TEMPERATURE °C) (pH) (DISSOLVED OXYGEN mg/l) (CONDUCTIVITY umhos/cm<sup>2</sup>)
- 14.) \_\_\_\_\_ 15.) \_\_\_\_\_ 16.) \_\_\_\_\_ 17.) \_\_\_\_\_  
(TOTAL CALCIUM mg/l) (SECCHI DEPTH meters) (CURRENT VELOCITY meters/sec) (WATER DEPTH meters)

- 18.) How far above the natural substrate is the sampler? (in meters) \_\_\_\_\_
- 19.) How many days was the sampler exposed to the water prior to collecting this data? 157
- 20.) Are zebra mussels present at this site? ( NO) ( YES) - if yes, comment below and notify the Zebra Mussel Monitoring Coordinator immediately.
- 21.) Other organisms observed on the sampler / site? (please list) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- 22.) Comments (if more space is needed, continue on the back of this form): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_





# Zebra Mussel Monitoring Report

(official use only - leave blank)  
ZM Monitoring Network #:

- 1.) \_\_\_\_\_  
(COLLECTOR'S NAME)
- 2.) Brook Field Renewable Power \_\_\_\_\_ 3.) 301-387-6616  
(COMPANY OR AFFILIATION) (PHONE NUMBER)
- 4.) 14 River-view Terrace Oakland MD 21550  
(ADDRESS)
- 5.) Deep Creek  
(NAME OF STATION)

## Physical / Chemical / and Biological Data

- 6.) \_\_\_\_\_ 7.) \_\_\_\_\_ 8.) \_\_\_\_\_  
(STATION LATITUDE) (STATION LONGITUDE) (RIVER MILE INDEX)

### 9.) Date and time this data was collected (circle year, month, day, & hour)

Year: '98 '99 '00 '01 '03

Month: 01 02 03 04 05 06 07 08 09 10 11 12

Day: 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Hour: \_\_\_\_\_ (if before 7am) 07 08 09 10 11 12 (noon) 13 (1pm) 14 (2pm) 15 (3pm) 16 (4pm) 17 18 \_\_\_\_\_ (if after 6pm)

- 10.) 54°F 11.) \_\_\_\_\_ 12.) \_\_\_\_\_ 13.) \_\_\_\_\_  
(TEMPERATURE °C) (pH) (DISSOLVED OXYGEN mg/l) (CONDUCTIVITY umhos/cm<sup>2</sup>)
- 14.) \_\_\_\_\_ 15.) \_\_\_\_\_ 16.) \_\_\_\_\_ 17.) \_\_\_\_\_  
(TOTAL CALCIUM mg/l) (SECCHI DEPTH meters) (CURRENT VELOCITY meters/sec) (WATER DEPTH meters)

- 18.) How far above the natural substrate is the sampler? (in meters) \_\_\_\_\_
- 19.) How many days was the sampler exposed to the water prior to collecting this data? 185
- 20.) Are zebra mussels present at this site? ( NO) ( YES) - if yes, comment below and notify the Zebra Mussel Monitoring Coordinator immediately.
- 21.) Other organisms observed on the sampler / site? (please list) NONE

### 22.) Comments (if more space is needed, continue on the back of this form):

Pulled sampler for year

