

**Attachment 11 to**

**GNRO-2012/00039**

**Entergy Nuclear Grand Gulf Nuclear Station License Renewal Environmental Audit  
– Hydrology Patton - Attachment Q labeled  
“Thermal Monitoring Reports for Winter and Summer 2007”**

**Attachment Q**

**Thermal Monitoring Reports for Winter and Summer 2007**

GRAND GULF NUCLEAR STATION

2007 NIPDES PERMIT RENEWAL APPLICATION

ATTACHMENT B

Thermal Monitoring Reports for Winter and Summer,  
2007



## **THERMAL MONITORING PROGRAM**

Part III, D, Item 3, Page 32 of 33, of the GGNS NPDES Permit requires measurements of Mississippi River receiving water temperatures, during periods of power generation when specified conditions occur. In addition, the permit standard conditions require monitoring during the winter of 2006/2007 and during the summer of 2007 with the results included with the application for permit re-issuance.

Because implementing conditions did not otherwise occur, the measurements were performed once during the winter of 2006/2007 and once during the summer of 2007, as prescribed by the GGNS NPDES Permit. The Thermal Monitoring Data Sheets documenting these exercises are attached. Please note in both instances there was no significant thermal influence on receiving waters. For your convenience a summary of the results is shown in the table below.

	<b>UPSTREAM SURFACE [C°]</b>	<b>UPSTREAM SUBMERGED[C°] [5 feet]</b>	<b>DOWNSTREAM SURFACE[C°]</b>	<b>DOWNSTREAM SUBMERGED[C°] [5 feet]</b>
<b>Winter [November - April]</b>	<b>13.0</b>	<b>13.0</b>	<b>13.0</b>	<b>13.0</b>
<b>Summer [May - October]</b>	<b>26.8</b>	<b>26.7</b>	<b>26.8</b>	<b>26.8</b>

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TEMPERATURE MONITORING REQUIREMENTS  
TEMPERATURE MONITORING DATA SHEET

I.	Date Performed		<u>11/8/06</u>
II.	Upriver Temperature (Point 1)	Surface	<u>13.0 °C</u>
		5 ft	<u>13.0 °C</u>
III.	Discharge Outlet Temperature (Note 1)	Surface	<u>20.6 °C</u>
		5 ft	<u>17.4 °C</u>
IV.	Barge Slip Outlet Temperature (Note 2)	Surface	<u>13.4 °C</u>
		5 ft	<u>14.2 °C</u>
V.	Downriver Temperature (Point 7) (Receiving Water)	Surface	<u>13.0 °C</u>
		5 ft	<u>13.0 °C</u>
VI.	Ambient Air Temperature		<u>22.6 °C</u>
VII.	River Level at Vicksburg		<u>22.67 ft</u>
VIII.	Outfall 001 Recorder Temperature		<u>27.2 °C</u>

NOTE # A681 CALIBRATION DATE 4/20/07

NOTE:

- A. Any temperature measurement in RECEIVING WATER which is equal to or greater than UPRIVER TEMPERATURE +2.8°C must be reported to the Chemistry Superintendent.
- B. Any temperature measurement in RECEIVING WATER which exceeds 32.2°C must be reported to the Chemistry Superintendent.

Prepared by *Rusty Shaw* 11/8/06  
Signature/Date

Reviewed by *[Signature]* 11/9/06  
Signature/Date

- (Note 1) If the 5 ft. sample is impractical, note location of measurement and N/A the 5 ft blank. (See Page 1, III. b)
- (Note 2) If subsurface measurement depth is less than 5 ft. note the approximate depth on the data sheet (See Page 1, III. c)

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TEMPERATURE MONITORING REQUIREMENTS  
TEMPERATURE MONITORING DATA SHEET

I.	Date Performed		<u>6/13/07 @ 14:30</u>
II.	Upriver Temperature (Point 1)	Surface	<u>26.8 °C</u>
		5 ft	<u>26.7 °C</u>
III.	Discharge Outlet Temperature (Note 1)	Surface	<u>28.5 °C</u>
		5 ft	<u>28.2 °C</u>
IV.	Barge Slip Outlet Temperature (Note 2)	Surface	<u>26.8 °C</u>
		5 ft	<u>26.8 °C</u>
V.	Downriver Temperature (Point 7) (Receiving Water)	Surface	<u>26.8 °C</u>
		5 ft	<u>26.8 °C</u>
VI.	Ambient Air Temperature		<u>31.3 °C</u>
VII.	River Level at Vicksburg		<u>19.76 ft</u>
VIII.	Outfall 001 Recorder Temperature		<u>30.1 °C</u>

NOTE #: A681  
Calibration due date: 12/6/07

NOTE:

- A. Any temperature measurement in RECEIVING WATER which is equal to or greater than UPRIVER TEMPERATURE +2.8°C must be reported to the Chemistry Superintendent.
- B. Any temperature measurement in RECEIVING WATER which exceeds 32.2°C must be reported to the Chemistry Superintendent.

Prepared by *Justin Shaw* 6/13/07  
Signature/Date

Reviewed by *Outsack* 6/17/07  
Signature/Date

- (Note 1) If the 5 ft. sample is impractical, note location of measurement and N/A the 5 ft blank. (See Page 1, III. b)
- (Note 2) If subsurface measurement depth is less than 5 ft. note the approximate depth on the data sheet (See Page 1, III. c)