Attachment 26 to

GNRO-2012/00039

ER Reference - GGNS 2007a (Water Withdrawal Mod), Groundwater Withdrawal Permit Modification Grand Gulf Nuclear Station, Port Gibson, MS

Entergy

Entergy Operations, Inc
Waterloo Road
P O Box 756
Port Gibson, MS 39150
Tel 601 437 2129

September 6, 2007

Ms. Lisa A May-McKenzie
Mississippi department of Environmental Quality
Office of Land and Water Resources
P O Box 10631
Jackson, MS 39289-0631

SUBJECT Groundwater Withdrawal Permit Modification
Grand Gulf Nuclear Station, Port Gibson, MS

GEXO-2007/00063

Dear Ms May-McKenzie

System Energy Resources, Inc (SERI) holds a number of permits for withdrawal for beneficial use at its Grand Gulf Nuclear Station (GGNS) near Port Gibson, Mississippi Certain permits for these withdrawals are for groundwater wells that supply the GGNS Unit 1 Water System.

The permit numbers are

OLWR Permit No. MS-GW-02967 [TW-1B]
OLWR Permit No MS-GW-15026 [Well 4]
OLWR Permit No MS-GW-14989 [Well 3]

Recent permit applications have identified the formation from which these wells withdraw groundwater as the Catahoula Formation. However, review of the boring logs and results of hydrogeologic investigations completed at the site reveal that these wells are actually completed in the Pleistocene terrace deposits and withdraw groundwater from the Upland Complex overlying the Catahoula Formation

Construction Well TW-1B was completed in September 1976 to a depth of 154 8 feet, and screened from approximately 114 feet to 154 feet below surface TW-1B is located in the same vicinity as two new wells installed in 1995 and 1996 (MS-GW-14989 and MS-GW-15026, respectively) The permit application for TW-1B in Section B identifies the Source of Supply to be the Pleistocene Terrace Deposits overlying the Catahoula Formation. The screened interval for all three wells currently permitted, as cited above, are screened to approximately the same depth. Surface elevation is approximately the same for all three wells cited in the current permits as it was for TW-1B Well installation records show the screened interval for Well #3 (OLWR Permit No MS-GW-14989) is 112 ft – 152 ft , and for Well #4 (OLWR Permit No MS-GW-15026) the screened interval is 110 ft – 150 ft

Groundwater monitoring well water level measurement results show a differential potentiometric head between wells screened in the Upland Complex (Pleistocene terrace deposits) and Catahoula Formation (Miocene age deposits). Recent pump test data also shows limited local hydraulic communication between the Upland Complex and the Catahoula Formation at GGNS. The Catahoula Formation is identified as a sole source aquifer by the USEPA as a significant regional drinking water source. However, since GGNS withdrawals are limited to the Upland Complex, and due to limited local communication between the two formations, the GGNS withdrawals have negligible impact on the Catahoula Formation

SERI requests MDEQ permit records for the three wells described above be revised to show the aquifer as the Upland Complex instead of the Catahoula Formation We have attached current permits for the above listed wells that we are requesting to be revised

If you have any questions, please contact me at (601)437-7312 or through my email address, [rshaw1@entergy com]

Sincerely,

Rusty Shaw

Rusty Shaw
Chemistry Specialist
Grand Gulf Nuclear Station

RDS/JML/rds

Attachments Current GGNS Groundwater Withdrawal Permits

cc Mr D.R Austin w/o
Mr C A Bottemiller w/o
Mr R.N. Buckley (M-ECH-595) w/a
Mr. T L Williamson (M-ECH-21) w/a
Mr. Derek Richard (Enercon Services, Inc , 6525 N Meridian, Suite 503, Oklahoma City, OK 73116) w/a
File [CHEM]
File [CENTRAL] (6)

CURRENT PERMITS FOR REVISION

STATE OF MISSISSIPPI

Department of Environmental Quality
Office of Land and Water Resources
P. 0. Box 10631
Jackson, Mississippi 39289-0631

PERMIT

TO DIVERT OR WITHDRAW FOR BENEFICIAL USE THE PUBLIC WATERS

This permit is issued to the landowner named below in accordance with the provisions of the Mississippi Water Laws, Mississippi Code Sections 51-3-1, et seq.(1972, as amended), and the regulations and standards as promulgated thereunder. Whether or not specifically named in this permit or in the applications for this permit, anyone using water from the diversion/withdrawal point described below shall do so in compliance with the provisions of this permit. Neither this permit, nor any authority conferred hereby, may be sold, conveyed, encumbered, assigned, or otherwise alienated, for any period of time or under any conditions whatsoever. This permit may not be modified, transferred or revoked without prior action by the Permit Board. Any attempts to modify, transfer or revoke this permit, or to take any other action on this permit, shall be invalid and unenforceable and may result in immediate revocation or suspension of this permit. The holder of this permit shall at all times be responsible for adherence to the terms and conditions of this permit. No agreement between the permit holder and any other party shall affect the obligations and liabilities of the permit holder. Water use under this permit is allowed only when the streamflow, lake level elevation, or static groundwater level (whichever, if any, is applicable) is above the established minimum, pursuant to Mississippi Code Section 51-3-7. Authorization is hereby granted to divert/withdraw water for the beneficial use designated herein, and for no other purpose, subject to the following terms, conditions, and limitations:

Permit Number: MS-GW-02967

Landowner Name: SYSTEM ENERGY RESOURCES INC
Landowner Address: PO BOX 31995
JACKSON MS 39286

Source Of Water: CATAHOULA AQUIFER

Beneficial Use: INDUSTRIAL

Diversion/Withdrawal Location: IR 1/4 of the IR 1/4 **Section:** 12 **Township:** 12N **Range:** 02E

County: CLAIBORNE **Quad:** GRAND GULF
Maximum Volume: 280.0798 Acre-Feet/Year *equivalent to* .25 Million Gallons/Day
Maximum Rate: 500 Gallons/Minute

Applicant Name: GRAND GULF NUCLEAR STATION
Applicant Address: PO BOX 756
PORT GIBSON MS 39150

Date Permit Issued: 11/18/1986
Date Permit Expires: 09/25/2016
Date Permit Modified: 09/26/2005
Date Permit Re-Issued: 09/25/2006

This permit shall be deemed null and void if construction has not begun within one (1) year of permit issue date

SPECIAL TERMS AND CONDITIONS: NONE

Sam Mabry
Office Director

STATE OF MISSISSIPPI

Department of Environmental Quality
Office of Land and Water Resources
P. 0. Box 10631
Jackson, Mississippi 39289-0631

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Permit Number: MS-GW-15026

Landowner Name: SYSTEM ENERGY RESOURCES, INC
Landowner Address: PO BOX 31995
JACKSON MS 39286-1995

Source Of Water: MIOCENE AQUIFER SYSTEM

Beneficial Use: INDUSTRIAL

Diversion/Withdrawal Location: IR 1/4 of the IR 1/4 **Section:** 12 **Township:** 12N **Range:** 02E

County: CLAIBORNE **Quad:** GRAND GULF
Maximum Volume: 280.0798 Acre-Feet/Year *equivalent to* .25 Million Gallons/Day
Maximum Rate: 500 Gallons/Minute

Applicant Name: ENTERGY OPERATIONS, INC
Applicant Address: PO BOX 31995
JACKSON MS 39286-1995

Date Permit Issued: 01/09/1996
Date Permit Expires: 09/26/2015
Date Permit Modified:
Date Permit Re-issued: 09/26/2005

This permit shall be deemed null and void if construction has not begun within one (1) year of permit issue date

SPECIAL TERMS AND CONDITIONS: NONE

Sam Mabry
Office Director

STATE OF MISSISSIPPI

Department of Environmental Quality
Office of Land and Water Resources
P. 0. Box 10631
Jackson, Mississippi 39289-0631

PERMIT

TO DIVERT OR WITHDRAW FOR BENEFICIAL USE THE PUBLIC WATERS

This permit is issued to the landowner named below in accordance with the provisions of the Mississippi Water Laws, Mississippi Code Sections 51-3-1, et seq.(1972, as amended), and the regulations and standards as promulgated thereunder. Whether or not specifically named in this permit or in the applications for this permit, anyone using water from the diversion/withdrawal point described below shall do so in compliance with the provisions of this permit. Neither this permit, nor any authority conferred hereby, may be sold, conveyed, encumbered, assigned, or otherwise alienated, for any period of time or under any conditions whatsoever. This permit may not be modified, transferred or revoked without prior action by the Permit Board Any attempts to modify, transfer or revoke this permit, or to take any other action on this permit, shall be invalid and unenforceable and may result in immediate revocation or suspension of this permit. The holder of this permit shall at all times be responsible for adherence to the terms and conditions of this permit. No agreement between the permit holder and any other party shall affect the obligations and liabilities of the permit holder. Water use under this permit is allowed only when the streamflow, lake level elevation, or static groundwater level (whichever, if any, is applicable) is above the established minimum, pursuant to Mississippi Code Section 51-3-7. Authorization is hereby granted to divert/withdraw water for the beneficial use designated herein, and for no other purpose, subject to the following terms, conditions, and limitations:

Permit Number: MS-GW-14989

Landowner Name: SYSTEM ENERGY RESOURCES, INC
Landowner Address: PO BOX 31995
JACKSON MS 39286-1995

Source Of Water: MIOCENE AQUIFER SYSTEM

Beneficial Use: INDUSTRIAL

Diversion/Withdrawal Location: IR 1/4 of the IR 1/4 **Section:** 12 **Township:** 12N **Range:** 02E

County: CLAIBORNE **Quad:** GRAND GULF
Maximum Volume: 280.0798 Acre-Feet/Year *equivalent to* .25 Million Gallons/Day
Maximum Rate: 500 Gallons/Minute

Applicant Name: ENTERGY OPERATIONS, INC
Applicant Address: PO BOX 31995
JACKSON MS 39286-1995

Date Permit Issued: 08/22/1995
Date Permit Expires: 09/26/2015
Date Permit Modified:
Date Permit Re-issued: 09/26/2005

This permit shall be deemed null and void if construction has not begun within one (1) year of permit issue date

SPECIAL TERMS AND CONDITIONS: NONE

Sam Mabry
Office Director