PMSTPCOL PEmails

From: Prasad, Rajiv [Rajiv.Prasad@pnl.gov]
Sent: Friday, February 22, 2008 11:28 AM
To: Nash, Harriet
Subject: TCEQ letter to STP
Attachments: TCEQ to STP letter re status of MCR.pdf

<<TCEQ to STP letter re status of MCR.pdf>>

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Subject: TCEQ letter to STP
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Received Date: 2/22/2008 11:28:19 AM
From: Prasad, Rajiv

Created By: Rajiv.Prasad@pnl.gov

Recipients:
"Nash, Harriet" <Harriet.Nash@nrc.gov>
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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 27, 2007

Mr. R.A. Gangluff, Manager, Chemistry
Environmental and Health Physics
STP Nuclear Operating Company
P.O. Box 289
Wadsworth, Texas 77483

Re: Cooling Water Intake Structures Phase II Rules; South Texas Project Electric Generating Station; TPDES Permit No. WQ0001908000.

Dear Mr. Gangluff:

I received your letter dated May 24, 2007, requesting that the Main Cooling Reservoir (MCR) be designated as a closed-cycle recirculating system and as not water in the state.

The Texas Commission on Environmental Quality (TCEQ) does not have an official method of "designating" a facility's operation as a closed-cycle recirculating system. However, we have reviewed the information you submitted and based on our best professional judgement, we consider your facility to be a closed-cycle recirculating system. As mentioned in your letter, the federal rule governing the 316(b) Phase II cooling water intakes is currently in the process of being suspended. For the time being, implementation of the 316(b) requirements will be based on best professional judgement (BPJ) and subject to EPA Region VI review.

We also concur that the Main Cooling Reservoir (MCR) at your facility does not meet the definition of water in the state.

If you have any questions, please contact me at (512) 239-2369.

Sincerely,

Kelly Holligan

Kelly Holligan, Leader
Industrial Team
Water Quality Division

KH/jp

Nuclear Operating Company
South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

May 24, 2007
NOC-TX-07016176
PFN: W02
STI No. 32165797

Mr. Kelly Holligan
Team Leader, Industrial Wastewater Permits
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

Re: Cooling Water Intake Structures Phase II Rules
South Texas Project Electric Generating Station
TPDES Permit No. 01908

Dear Mr. Holligan:

Thank you for meeting with my staff on May 15, 2007 to discuss the South Texas Project Electric Generating Station (STPEGS) cooling reservoir and other wastewater discharge permit issues. Based on our discussion, STP Nuclear Operating Company (STPNOC) is submitting the following information regarding the Main Cooling Reservoir (MCR) and the applicability of the regulations for cooling water intake structures. We are confident that the South Texas Project Station (STP) complies with the regulation by employing a closed-cycle recirculating cooling system as defined in 40 CFR §125.93. Pursuant to 40 CFR §125.94(a)(1)(i), cooling water flow for this facility is commensurate with a closed-cycle recirculating cooling system, as demonstrated below. Additional technical information is included in letters dated March 7, 2005 and August 18, 2005 previously submitted to the Texas Commission on Environmental Quality (TCEQ).

STP is located on 12,220-acres in Matagorda County, approximately 15 miles southwest of Bay City along the west bank of the Colorado River. The facility consists of two electric-generating units, which share a closed-cycle recirculating cooling reservoir. Water from the MCR is passed through the cooling loops of both units then returned to the MCR for heat dissipation before cycling back through the cooling systems.

The MCR is a perched, off-channel, on-site industrial cooling impoundment of approximately 7,000 acres, impounding over 202,600 acre-feet of cooling water at its maximum operating level. Dikes are installed in the MCR that channel the water flow to maximize circulation time for heat dissipation before the water is recirculated back to the generating units. Blowdown from the MCR to the Colorado River has not occurred since March 1997. Should blowdown be required it would occur through an underground pipe that discharges back into the Colorado River. This point is designated as Outfall 001 in the TPDES Permit No. 01908. The MCR is also equipped with a gated spillway for emergency use. The MCR is not a "water of the U.S." as defined at 40 CFR § 122.2. The MCR is not considered a "water of the State" based on internal and external outfall designations in the permit. The MCR is on private property and exists solely for

industrial cooling. It is not a publicly managed water body and has no recreational uses. The general public has never had access to the MCR nor is any planned in the foreseeable future.

The only sources of new water to the MCR are direct rainfall and make-up water diverted periodically from the Colorado River, primarily at high river flows. Water from the Colorado River is pumped approximately 1 mile via a 108 inch pipe to the MCR. To protect inflows during low river flow conditions, the water right for STP includes a special provision to limit diversion from the Colorado River to 55% of the flow over 300 cubic feet per second, to protect inflows during low river flow conditions. Currently, the intake consists of trash racks, rotating screens with 3/8 inch mesh and 4 pumps. In addition, the reservoir makeup pumping facility has the following design:

- The traveling water screens are flush with the river shoreline;
- The maximum approach velocity to the traveling water screens is 0.5 feet per second;
- Fish passageways were constructed in the wing walls between the traveling screens to facilitate fish migration parallel to the screen surfaces; and
- A sluice and discharge line was installed for the purpose of returning all impinged organisms directly to the river, downstream of the intake structure, immediately after being backwashed from the screens.

The pumps are operated intermittently based on reservoir level, river flow, and the operability of the makeup pumping facility. A cooling reservoir evaporates less water per unit of heat dissipated than a cooling tower, thus dissolved solids build up more slowly over time. This is complemented by the designed seepage from the MCR, which maintains the structural integrity of the reservoir embankment. Rainfall further dilutes the dissolved solids in the MCR. These factors minimize the blowdown and make-up required to maintain MCR water quality. As a result, intake water flow for cooling purposes at STP reflects best technology available (closed-cycle recirculating systems) for minimizing adverse environmental impact.

As was discussed in the May 15, 2007 meeting, several provisions of the Phase II rule are in the process of being suspended by the U.S. Environmental Protection Agency and the Regional Administrators have been authorized to review the applicability of the rule on a case by case basis using Best Professional Judgment. Based on that authorization and the information provided, STPNOC is requesting that TCEQ designate the MCR as a closed-cycle recirculating system. We are also requesting concurrence that the MCR does not meet the definition of a "water of the State". If you have any questions or require additional information, please contact Ms. S. L. Dannhardt at (361) 972-8328.

Sincerely,

R. A. Gangluff
Manager, Chemistry
Environmental and Health Physics

cc: Mr. Earl Lott
Special Assistant, Office of Permitting, Remediation & Registration
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