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May 27, 2008

Michael G. Brownell  
Chief, Water Resources Management Division  
Susquehanna River Basin Commission  
1721 North Front Street  
Harrisburg, PA 17102-2391

Re: Susquehanna River Basin Commission Letter to AmerGen Energy Company  
dated April 23, 2008; Commission Docket No. 19950302

Dear Mr. Brownell:

In a letter dated April 23, 2008, the Susquehanna River Basin Commission (SRBC) requested that AmerGen Energy Company, LLC (AmerGen) respond to three questions regarding replacement of the steam generators at the Three Mile Island Nuclear Station Unit 1 (TMI-1). The letter also requested that AmerGen identify plant changes that have been necessitated by or are planned as part of TMI-1 license renewal and relate to operational parameters or to the capacity to withdraw, discharge, or consume water.

This letter responds to the SRBC's three questions about steam generator replacement. For clarity, each SRBC inquiry is repeated below, followed by AmerGen's response. Supporting materials are attached as indicated in the responses. No plant changes are necessitated by or planned as part of TMI-1 license renewal that relate to operational parameters affecting the capacity to withdraw, discharge, or consume water.

Question 1 *Is the new equipment identical to the existing equipment or does it allow for additional generation capacity?*

Response The new (enhanced) once-through steam generators (EOTSGs) to be installed at TMI-1 are in-kind replacements. They are nearly identical to the existing once-through steam generators (OTSGs), but their materials of construction have been analyzed and rated for performance at a higher reactor core thermal output than is approved for the existing OTSGs.

The EOTSGs could support increased generating capacity from TMI-1 in the future, but only after AmerGen applies to and receives a license amendment to authorize that increase from the U.S. Nuclear Regulatory Commission (NRC). AmerGen is not applying for such a license amendment as part of the TMI-1 license renewal.

Question 2     *How will this replacement affect operation at TMI-1 as it relates to any changes in withdrawal or consumptive water use?*

Response     Replacement of the OTSGs at TMI-1 will not increase withdrawal, discharge, or consumption of water from the Susquehanna River Basin for the reasons provided below.

The principal physical system within the plant that interfaces with the OTSGs is the feedwater system. This closed-loop system removes thermal power from the reactor core via the OTSGs and delivers it to the secondary turbine plant in the form of steam. Another system, the circulating water system, removes residual heat from the turbine plant via a condenser and delivers it in the form of heated water to two natural draft cooling towers. The cooling towers dissipate the residual heat through evaporative cooling and blow down. Water is withdrawn from the Susquehanna River to replenish evaporative and blow down losses from the circulating water system. Hence, water withdrawal and consumption are directly related to circulating water system losses, which depend on the thermal power output of the reactor core. A schematic of the TMI-1 power cycle is attached (Attachment 1).

After the existing OTSGs are replaced with the new EOTSGs, the thermal power output of the TMI-1 reactor core at full power will still be limited to 2,568 MWt by NRC Operating License DPR-50. All secondary turbine plant parameters (i.e., main steam and feed water flows, system pressures, and system temperatures) will remain unchanged and be controlled at present levels. Circulating water system blow down volumes will remain within existing range. As a result, water withdrawal and consumptive use will not increase.

Question 3     *Is this replacement integral or interrelated to other replacements or upgrades that are contemplated at TMI-1 that will have the potential to change the withdrawal or consumptive water use in the future?*

Response     No. AmerGen will seek SRBC review before it makes changes at TMI-1 that AmerGen expects would increase water withdrawal or consumptive use beyond levels currently authorized for the TMI site by the SRBC.

If there are questions, please contact me.

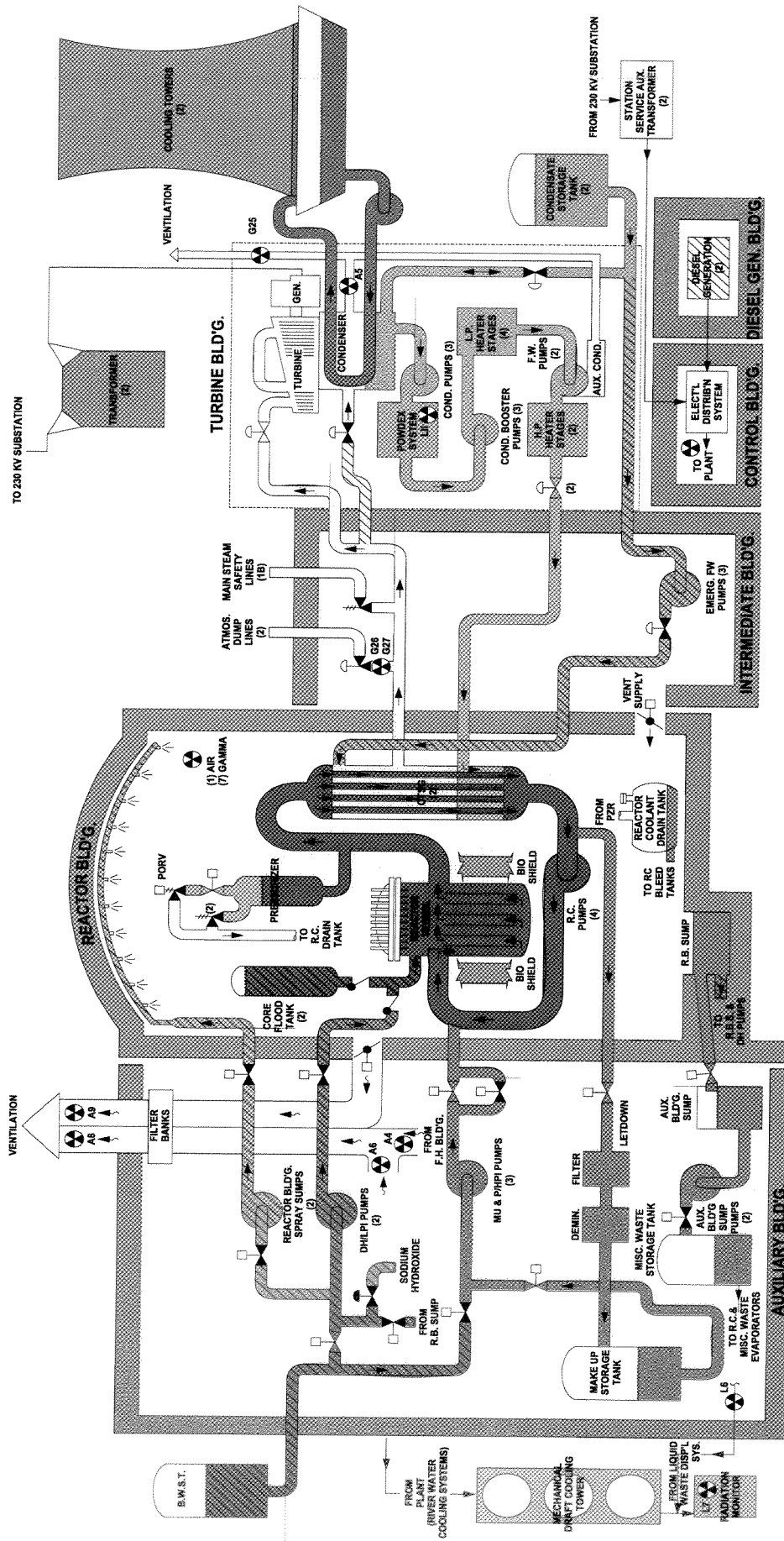
Respectfully,



Michael P. Gallagher  
Vice President

Attachments

cc:     Bill Noll (TMI Site Vice President)  
         Tom Dougherty (TMI Plant Manager)  
         Louise Lund (NRC)



# Three Mile Island - 1 Systems

## LEGEND

- PUMP
- RADIATION MONITOR
- RELIEF VALVE
- MOTOR OPERATED VALVE
- ONCE THROUGH STEAM GENERATOR
- BORATED WATER STORAGE TANK
- REACTOR COOLANT
- REACTOR BUILDING
- FEEDWATER
- AIR OPERATED VALVE
- CHECK VALVE
- SYSTEMS ON AUTO STANDBY