

October 16, 2014
L-14-351

Ryan Decker
Department of Environmental Protection
Bureau of Water Quality Management
Southwest Region Office
400 Waterfront Drive
Pittsburgh, PA 15222

SUBJECT:
Beaver Valley Power Station Request For Continuous Chlorination

Beaver Valley is requesting approval for continuous chlorination of the Unit 1 Turbine Plant River Water, Reactor Plant River Water System and the Unit 2 Service Water System. Currently, the systems are treated with a non-oxidizing biocide for two (2) hours per day in accordance with NPDES Permit 0025615.

The current treatment has been less than effective at preventing microbiological influenced corrosion (MIC) and heat exchanger fouling in plant systems important to safety. In December 2012, the station was required to replace a safety related heat exchanger due to MIC. The station has been required to perform extensive cleaning during refueling outages to address corrosion in safety related recirculation spray heat exchangers.

During an Institute of Nuclear Power Operations (INPO) evaluation, it was noted that there was an inadequate mitigation strategy for river water and service water corrosion and micro-biologically induced corrosion. As a result of this evaluation, switching from a non-oxidizing biocide to an oxidizing biocide and increasing treatment of the river water, service water, and fire protection systems is necessary to mitigate the MIC at Beaver Valley.

Beaver Valley submitted a Part II permit application with the department on August 21, 2014, documenting the modification and the proposed treatment changes. During review of the modification, it was identified that two (2) additional NPDES Outfalls may need to be dechlorinated.

Outfall 002 typically is discharged during backwash of intake screens. The screens only backwash when there is a high differential pressure across them which is dependent upon the material in the Ohio River. This discharge is intermittent and

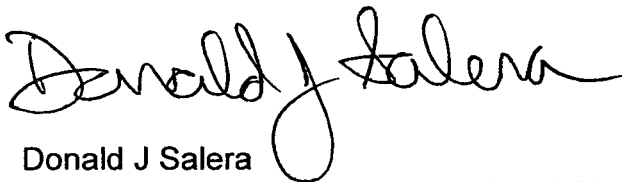
Cool
Water

occurs infrequently, approximately 1 hr per day, 1 day per week. Estimated long term average flow is 0.046 MGD and maximum flow is 0.092 MGD. Beaver Valley will install a passive dechlorination system to treat Outfall 002. The system will consist of sodium sulfite tablets that will treat wastewater from Outfall 002 when discharged.

Outfall 003, consisting partially of river water from the Unit 1 Emergency Diesel Generator cooling water may require dechlorination. The emergency diesel generators are typically run one time per month for testing purposes and in the event of loss of offsite power. Estimated flow from this system is 0.084 MGD when discharging. Beaver Valley will install either a passive sodium sulfite system or add sodium bisulfite to treat the wastewater from Outfall 003 when discharged.

A chemical additive request for sodium sulfite will be submitted under separate attachment. Beaver Valley requests expedited approval for continuous chlorination of the Unit 1 Turbine Plant River Water, Reactor Plant River Water System and the Unit 2 Service Water System to ensure continued safe, reliable, operation.

Sincerely,



Donald J Salera
Manager, Nuclear Environmental and Chemistry

cc: ✓ Document Control Desk US NRC (NOTE: No new US NRC commitments are contained in this letter.)
US Environmental Protection Agency
Ms. Amanda Schmidt, PA DEP/Bureau of Water Quality Management