

Exelon Nuclear  
Limerick Generating Station  
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NPDES Permit 00051926

October 15, 2003

Mr. Sohan Garg  
Water Management Program  
Pennsylvania Department of Environmental Protection  
Lee Park, Suite 6010  
555 North Lane  
Conshohocken, PA 19428  
South Eastern Regional Office

Subject: Limerick Generating Station  
Industrial Waste NPDES Permit #PA00051926

Reference: Letter B. Hanson (LGS) to J. Fields (PADEP) dated 7/25/03

Dear Mr. Garg:

This letter is in response to your request for information regarding the amount of discharge from the Limerick Generating Station's Emergency Spray Pond and the potential effects of Aquashade on the Schuylkill River. The impact of Aquashade on the Schuylkill River will be negligible. The concentration of Aquashade in the Emergency Spray Pond will be maintained at 1 ppm. The overflow of the Spray Pond enters the Cooling Tower Blowdown line, which flows to Outfall 001. Normal blowdown flow is between 6,000 and 8,000 gpm. The data available for flow from the Spray Pond show approximately 29.26 million gallons over two years (including precipitation and two periods of bleed and feed operation). The concentration of the Aquashade that could reach the Schuylkill River is 0.009 ppm. This value was calculated using several assumptions; the blowdown flow is low at 6,000 gpm, the entire two-year overflow volume is released in one year at 56 gpm.

In the paper, "Evaluation of Transparency and Light Attenuation by Aquashade" by John D. Madsen, et. al. (See Attached), one ppm of Aquashade reduced transparency by approximately 10 %, and 5 ppm reduced transparency by approximately 30 %. The decrease in transparency due to the 0.009 ppm solution would be 0.09%, assuming linear response from zero to 1 ppm. The absorbance at wavelength 625 nm of a one ppm solution is 0.025. The absorbance of a 0.009 ppm solution would be approximately 0.000225 before any dilution by the Schuylkill River.

At the low absorbance value and the small decrease in transparency the Aquashade will have little to no effect on the vegetation of the Schuylkill River down stream of the Limerick Generating Station's discharge line. If you have further questions on this matter, please feel free to contact either Mr. Robert Alejnikov at 610-718-2513 or Mr. Todd Tierney at 610-718-2701. Thank you for your cooperation in this matter.

Sincerely,



Bryan Hanson  
Plant Manager-LGS

cc: A. Burritt USNRC Sr. Resident Inspector-LGS  
H. Miller USNRC Region I Administrator  
Document Control Desk, USNRC, Wash. DC

IE25

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