

Exelon Nuclear
Limerick Generating Station
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NPDES PA 00051926

July 25, 2003

Ms. Jennifer Fields, P.E.
Chief, Permits Section
Water Management Program
Department of Environmental Protection
Lee Park, Suite 6010
555 North Lane
Conshohocken, PA 19428

Subject: Water Treatment Additive Request for Spray Pond

Reference: LGS Industrial Waste NPDES Permit #PA00051926

Dear Ms. Fields:

Limerick Generating Station is requesting the addition of Aquashade, an aquatic plant growth control chemical, to the list of approved chemicals. Aquashade is a dye which limits sunlight from reaching submerged plant life, and would be added to the Emergency Spray Pond to control filamentous algal growth. The Emergency Spray Pond provides cooling water to essential station systems in the event of specific non-routine operating conditions. The algae blooms create unfavorable chemical conditions in the Spray Pond, which can lead to increased corrosion of station equipment. The algae can also increase the potential for fouling of the system from mats of algae or dead algae accumulation. This could lead to an inoperable condition of essential plant equipment. Spray Pond releases are minimal, and typically due to displacement of water by precipitation, or the unlikely event of Cooling Tower water ingress. Releases may also be made via a river water makeup process, in order to reduce contaminants in the Spray Pond. Aquashade is used in various ponds and takes with little or no out flow. This product is used by several nuclear plants, including PP&L's Susquehanna Station in Berwick, PA. The MSDS and toxicity data is attached. The product is registered with the USEPA under FIFRA as 33068-1.

The concentration of Aquashade will be the manufacturers recommended 1 ppm. The Spray Pond volume is 30 million gallons; therefore, the initial dose will be 30 gallons. The product, which has a half-life of approximately 30 days, will be added every four to six weeks. This maintenance dosage will be a volume between 15 and 30 gallons. The concentration of the Aquashade will be determined once a week for the first two months, in order to assess the stability of the product. Following this evaluation, the frequency of analysis will be adjusted. The concentration will be determined by spectrophotometric comparison of absorbance to a set of standard concentrations between zero and 2 ppm. LGS is requesting permission to maintain the concentration year round, although the additions will probably only be made from March through November. The product will be applied by direct addition to the perimeter of the Spray Pond, pumping through a spare line of the associated chemical injection system, or dispersing by boat into the Spray Pond. The amount of Aquashade used will be recorded on the Chemical Usage forms required by the permit. The application rate of CT-1300, which is currently utilized

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for algae control, would likely be reduced during periods when Aquashade is applied to the Spray Pond. Specific changes to the current rates will be determined based on evaluation of the effectiveness of the new product.

If you have any questions on this matter please feel free to contact Mr. Todd Tierney of my staff at 610-718-2701, or Mr. Tracy Siglin of Exelon Nuclear Environmental Affairs at 610-765-5904. Thank you for your cooperation in this matter.

Sincerely,



Bryan C. Hanson
Plant Manager-LGS

cc: H. Miller, Region 1 Administrator, USNRC
A. Burritt, Resident Inspector, USNRC
Document Control Desk, USNRC, Wash. DC

bcc: R. DeGregorio – GML 5-1
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T. Tierney – SSB 2-3
R. Newmaster – SSB 2-3
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S. Rafferty-Czincila – SSB 3-4
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