



FAY, SPOFFORD & THORNDIKE, LLC
5 BURLINGTON WOODS - BURLINGTON, MASSACHUSETTS 01803

Memorandum

To: Mr. Wayne Davies, Chairman
Hopkinton Board of Appeals

From: Daniel P. Hallahan, Electrical Engineer
Fay, Spofford & Thorndike, LLC (FST)

Date: April 13, 2004

RE: Exterior Lighting System – Materials Recovery and Recycling Facility

As requested, FST has completed a review of the exterior lighting system related to the Special Permit Applications submitted to the Board of Appeals for the proposed Materials Recovery and Recycling Facility on Wood Street. The following plan submittal was received via electronic file on March 16, 2004 at FST's Burlington Office.

- Site Lighting, Figure ES-2, dated October 11, 2003 as prepared by Vincent A. Ditorio, Inc., Consulting Engineers (VAD) and Brown and Caldwell (B&C), Environmental Engineers and Consultants.

Exterior Lighting System

The photometrics plan provided by VAD and B&C on behalf of Harvey Industries revealed that all exterior lighting within the site assigned area is designed to minimize light intrusion onto Route 135 and adjacent residences. The design utilized full-cutoff lighting, which means that there will be no drop glass lens refractor on the luminaire, therefore from a distance the luminaire will be virtually invisible or appear as a slit of light protecting the surrounding area from direct stray light minimizing light intrusion off of the site. This lighting design meets Condition No.12 of the Hopkinton's Board of Health Site Assignment and Settlement Agreement.

FST does note the light levels or brightness associated with the parking lot area are considered high when compared to Illuminating society of North America (IESNA) standards for parking facilities in *IESNA RP-20-98 Lighting for Parking Facilities*. Justification for the higher light levels was provided by associates of VAD and B&C during a teleconference with FST on March 9, 2004. VAD and B&C stated that there are safety concerns resulting from the high levels of truck activity onsite. In general, headlights on the trucks are rendered ineffective when trucks turn or are in reverse resulting in very limited visibility. Shadowing from the truck itself or other trucks further lowers visibility. FST

requested the proposed hours of lighting and operation for the facility be documented and recommended that when the Materials Recovery and Recycling Facility is not in operation the light levels be lowered to only that which is needed for security reasons. It was agreed a written response would be provided by the applicant's consultants regarding this issue.

If there are any questions regarding our comments and/or recommendations, please do not hesitate to contact me or Mr. Creg W.P. Cascadden, P.E. of this office at 1-800-835-8666.

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