2

RECEIVED
PUBLIC SERVICE
COMMISSION
OSEC-FILES-ALBANY
2005 MAR -3 PM 1:35

February 28, 2005

ORIG-FILES
C 05-M-0090
15 COPIES DIST
PER 1/28/2005 LIST

Jaclyn A. Brilling, Secretary
New York State Public Service Commission
3 Empire State Plaza
Albany, NY 12223-1350

Philip W. Brickner, M.D.

Director, Tuberculosis Studies
Department of Community Medicine

Professor of Clinical Medicine
New York Medical College

Saint Vincents
Hospital and Medical Center

153 West 11th Street
New York, NY 10011
Telephone 212 604-8025
Fax 212 604-7627
e-mail drpwb@aol.com

Academic
Medical Center
of New York
Medical College

Dear Ms. Brilling:

Subject: Case: 05-M-0090—In the Matter of System Benefits Charge III

Questions have been posed concerning the continuation of the System Benefit Charge (SBC) program as considered in the referenced case, above. While we are not in a position to comment on all of the questions, we believe that value is being achieved through these programs. We offer our comments in support of continuation of SBC where we have input to share, as follows:

Question 1: To what extent have the goals and objectives established by the Commission been achieved?

In our work at St. Vincent's Hospital—Manhattan in the Department of Community Medicine, we have been seeking ways to provide preventative healthcare to the underserved poor, many of whom are homeless. When the epidemic of tuberculosis hit the United States in the late 1980s to early 1990s, New York State and specifically New York City were at the epicenter. We recognized this TB resurgence during our work in homeless shelters and wondered how we might apply the air cleansing technology of ultraviolet germicidal irradiation (UVGI) in these congregate spaces to reduce the transmission of this airborne disease. The result was the launch of the largest field trial of W G I effectiveness ever attempted, the Tuberculosis Ultraviolet Shelter Study (TUSS). A multidisciplinary team of medical doctors, research scientists, lighting specialists, ventilation engineers and W manufacturers came together to conduct the study, improve commercially available UV equipment and document the findings in peer reviewed publications. Our core team consists of colleagues at St. Vincent's Hospital—Manhattan, scientists and physicians at the Harvard School of Public Health, and W manufacturers in New York State and elsewhere. Our publications are now being cited in international publications[1], CDC Guidelines for TB Control in Healthcare Facilities[2] and by NIOSH[3].

We have worked with New York State W G I manufacturer to improve the efficiency of their products. This has been achieved by improving the optical

---

[1] CIE. (2003). "CIE 155:2003 Ultraviolet Air Disinfection." CIE *Technical Report*, 1-64.
[2] CDC. (2005 [Draft]). "Guidelines for preventing the transmission of Mycobacterium tuberculosis in health-care settings, 2005." CDC, Atlanta.
[3] NIOSH. (2004 [Draft]). "Engineering Controls for Tuberculosis: Upper-Air Ultraviolet Germicidal Irradiation." National Institute for Occupational Safety and Health, Cincinnati, OH.

delivery, adjustable electronic ballasts and overall increase in W output so that 20% fewer fixtures are required to deliver the same UV energy distribution within a congregate space. Additionally, we are developing application case studies for the engineering specifiers market that showcases a New York State W G I manufacturer's equipment[4].

From an energy efficiency standpoint, our laboratory research has confirmed the potential of W G I to cleanse large volumes of air safely while achieving the same energy savings as advanced fluorescent lighting technologies. The CDC 1994 guidelines for TB control in healthcare facilities recommended doubling the standard air exchange (6 ACH) to 12 ACH. W G I systems have been shown to produce air cleansing at least equivalent to 10 ACH which would be additive to the standard 6 ACH.[5] To achieve these same rates of air cleansing by increasing the ventilation would demand a much greater expenditure of energy. Because it is an economical means of treating large volumes of air, W technology can be placed in a wide range of high-risk settings. We are working on an advanced W-fan-lighting fixture for the mass market in order to integrate all the findings we have achieved to date, and thus to make UV technology widely available as a preventative measure against airborne diseases.

Our work would not have advanced to its present state without the grant support we have received from SBC funding, and through its management and interest by New York State Energy Research and Development Authority.

Question 2: Should the SBC program continue beyond its current expiration date of June 20, 2006? If so, for what duration should the SBC be extended and at what funding level?

We believe the SBC should continue for the same time period as previously and at the same level of funding.

Thank you for this opportunity to comment on the SBC programs.

Sincerely,

Philip W. Brickner, MD
Director of Tuberculosis Studies

Richard L. Vincent
Manager & Lighting Specialist

---

[4] Boyce, P. (2003). "Controlling Tuberculosis Transmission with Ultraviolet Irradiation." Rensselaer Polytechnic Institute, Lighting Research Center, Troy NY.

[5] Riley, R. L., Knight, M., and Middlebrook, G. (1976). "Ultraviolet susceptibility of BCG and virulent tubercle bacilli." Am Rev *Respir Dis*, 113(4), 413-8.; Xu, P., Peccia, J., Fabian, P., Martyny, J. W., Fennelly, K. P., Hernandez, M., and Miller, S. L. (2003). "Efficacy of ultraviolet germicidal irradiation of upper-room air in inactivating airborne bacterial spores and mycobacteria in full-scale studies." *Atmospheric* Environment, 37(3), 405-419.