

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Office of Air Quality Planning and Standards  
Research Triangle Park, North Carolina 27711

27 JUL 1987

MEMORANDUM

SUBJECT: Ambient Air Issue from New Jersey Department of Environmental Protection (DEP)

FROM: G.T. Helms, Chief  
Control Programs Operations Branch

TO: William S. Baker, Chief  
Air Branch, Region II

In response to your request, have reviewed your position with respect to a determination of ambient air applicability in the vicinity of the proposed EF Kenilworth, Inc. (EFKI) cogeneration unit in Union County, New Jersey. As we understand it, EFKI will build and operate the plant on property leased (long-term lease) from Schering Corporation. As we see it the EFKI operator will be completely separate from the Schering operation and except for the land owned and operated by a different Company. The fact that EFKI has entered into a contract to supply electricity/steam to Schering is not really relevant to the ambient air issue.

We agree with your position that all property outside of the property leased and controlled by EFKI would be considered ambient air. The word "controlled" is emphasized since nothing is said in either your memorandums or New Jersey's letter to Region II about what, if any, fence or other physical barrier would be installed to prevent public access to the EFKI leased property. If such physical barrier is not erected, then all land including the leased site would have to be considered as ambient air.

If you have any questions, please contact Sharon Reinders, at 629-5255.

cc: D. Tyler  
J. Tikvart  
D. Wilson  
G. McCutchen

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION II

DATE: Jun 19, 1987

SUBJECT: Ambient Air Issue from New Jersey Department of Environmental  
Protection

FROM: William S. Baker, Chief  
Air Programs Branch

TO: G.T. Helms, Chief  
Control Programs operation Branch (MD-15)

Attached is a copy of a letter directed to us by the State of New Jersey's Department of Environmental Protection. It requests an EPA determination on what constitutes "ambient air" for a particular air permit application. Kevin Doering explained this issue to Dean Wilson of the Modeling Clearinghouse on June 2 and provided him with our preliminary determination. We believe that, because the cogeneration facility could operate independently and will provide power to other sources outside of the Schering Corporation, property outside of its property line should be reviewed for ambient impact.

We would appreciate your review and concurrence or comment. We would like to be able to respond to Dr. Berkowitz within two weeks if possible. Thank you for your help.

Attachment

State of New Jersey  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF ENVIRONMENTAL QUALITY  
CN 027, TRENTON, N.J. 08825

May 29, 1987

JORGE H. BERKOWITZ, Ph.D.  
Director

(609) 292 - 5383

Conrad Simon, Director  
Air and Waste Management Division  
USEPA Region II  
26 Federal Plaza  
New York, NY 10278

Dear Mr. Simon:

We are reviewing an air pollution control permit application for the proposed Kenilworth, Inc. (EFKI) cogeneration system at the Schering corporation facility in Kenilworth, Union County. Schering has entered into an agreement with EFKI to have EFKI supply the electrical energy and process steam for Schering's manufacturing plant through a cogeneration system to be constructed on property leased by EFKI from Schering (see attached). The leased property is within the property line of Schering's Kenilworth facility. The cogeneration system is to be built, owned and operated by EFKI.

We request EPA's interpretation of "ambient air" (40 CFR 50.1(e)) with regard to the portion of the Schering property that is not leased to EFKI. In our air quality modeling analyses of the emissions from the EFKI facility, should we consider the property line to be the boundary of the leased property or the boundary of the Schering plant?

Please have EPA's determination forwarded in writing to William O'Sullivan (609-984-6721) at your earliest convenience. The resolution of this issue will remove a major question in the review of this application.

Thank you.

Sincerely yours,

Jorge H. Berkowitz, Ph.D.  
Director

JHB/TJ/df  
Attachment

c: H. Wortreich  
W. O'Sullivan  
J. Elston  
R. Dyba  
R. Craig

EBASCO SERVICES INCORPORATED  
160 Chubb Avenue, Lyndhurst, NJ 07071  
(201)460-1900

Air Quality Evaluation  
Approach and Modelling Protocol  
For The Kenilworth Cogeneration Facility

The following discussion presents an approach to the air quality evaluation of a proposed cogeneration facility (the "Facility") to be built, owned and operated in Kenilworth, New Jersey by EF Kenilworth, Inc. ("EFKI"), a wholly owned subsidiary of Energy Factors, Incorporated ("EFI"), a California corporation engaged in the business of developing, owning and operating electric and thermal energy production facilities throughout the United States.

The Facility is to be constructed on a site (the "Site") which has been leased by EFKI from Schering Corporation ("Schering"), a wholly-owned subsidiary of Schering-Plough Corporation ("Schering-Plough") for a term of fourteen years (plus two renewal terms of ten years each) pursuant to a Site Lease between Schering and EFKI dated as of December 10, 1985.

EFKI has entered into a Turnkey Construction Contract with Ebasco Constructors Inc., dated as of July 29, 1986, for the construction of the Facility, which is projected to be completed on or prior to June 1988.

The Facility will produce electrical energy and process steam. EFKI has entered into a power purchase agreement (the "PPA") with Jersey Central Power and Light Company ("JCP&L") dated as of May 20, 1986, for the sale by EFKI of electrical energy from the Facility to JCP&L, which energy would be wheeled from the Site to JCP&L by Public Service Electric & Gas Company ("PSE&G"). EFKI has also entered into an Energy Services Agreement (the "ESA") with Schering dated as of December 10, 1985, pursuant to which EFKI will supply Schering with Schering's electrical energy and process steam requirements at its pharmaceutical manufacturing plant located adjacent to the Facility Site.

Due to the favorable economics and energy conservation aspects of the cogeneration process, EFKI will be able to sell electrical and thermal energy to Schering at prices which should enable Schering to realize significant savings in its aggregate energy expenditures. In addition, because Schering will rely on EFKI for its principal steam supply, Schering will cease routine operation of its boilers 3, 4 and 5 (the "Boilers"). (It is anticipated that the air emissions resulting from the operation of the Facility will be significantly lower than those for which the Boilers are currently permitted.) The Boilers will be maintained in a standby status to provide standby or supplemental process steam to Schering if required.

## 1.0 PROJECT DESCRIPTION

### A. General

The Facility will produce 25,068 kWe (net) when supplying 40,000 lbs/hr of 135 PSIG steam. The natural gas fired combined cycle cogeneration plant has backup capability to operate on number 2 distillate fuel oil during natural gas supply curtailment. The Gas Turbine Generator (GTG) package will be powered by a GE Model LM2500-33 turbine, that is water injected for NOx control. The Heat Recovery Steam Generator (HRSG) is a non-fired 3 pressure level unit capable of a maximum generation of approximately 70,000 lb/hr of steam. Steam from the HRSG will operate a Steam Turbine Generator (STG). The STG will be a single pressure, multi-value, multi-stage, automatic extraction condensing unit, providing a minimum process extraction of approximately 17,000 lb/hr. Both the GTG and the STG will be equipped with 13.8 KV generators.

- The Facility has a nameplate rating of 29,500 kW while extracting a minimum flow of 17,000 lb/hr of steam.