



STATE OF DELAWARE  
DEPARTMENT OF NATURAL RESOURCES  
& ENVIRONMENTAL CONTROL  
89 KINGS HIGHWAY  
P.O. BOX 1401  
DOVER, DELAWARE 19903

OFFICE OF THE  
SECRETARY

TELEPHONE (302) 736-4403

**Secretary's Order No. 89-A-7**

**Re: DP&L Indian River--Tall Stack**

**Date of Issuance: February 15, 1989**

**I. Background**

On November 27, 1988 a public hearing was held at Sussex Jr. High School in Millsboro, Delaware, to receive evidence on an application by Delmarva Power to construct a 525' smoke stack for Units No. 1 and No. 2 at the Indian River Power Plant in order to prevent occasional violations of State ambient air quality standards caused by aerodynamic downwash from other nearby structures at the plant. Notice of the hearing was provided as required by law. This order is entered pursuant to 7 Del. C. §6006(4).

**II. Findings of Fact**

1. Pursuant to a DNREC Conciliatory Order, dated October 21, 1986, and amended on June 24, 1988, Delmarva Power undertook the evaluation of sixty possible solutions to air quality standard violations at Indian River including various combinations of pre-combustion, combustion and post-combustion techniques.

2. The Company narrowed its alternatives to seven potential solutions based on what it perceived to be an EPA-mandated deadline of February 29, 1992 for total compliance.

3. Of the seven candidate solutions, the most cost-effective approach which met the Company's criteria (including the perceived EPA deadline) was determined to be a stack not less than 500 feet in height to serve Units No. 1 and No. 2 for which a permit is being sought in this application.

4. Although the chosen 525' stack will solve the immediate problem of occasional ambient air quality violations, it will not reduce SO<sub>2</sub> emissions but rather will disperse them more than the present 230' stacks, especially in the vicinity of the plant.

5. It is probable that pending legislation in Congress on acid rain will require reduction of SO<sub>2</sub> emissions from facilities such as Delmarva Power, although the extent of reduction is unknown.

6. Except for very rare coal with 0.4% sulfur content, use of low sulfur (i.e., 0.7%) coal alone will not eliminate the violations. The use of these low-sulfur coals would require significant equipment modifications as well as a stack extension, at considerably higher capital, fuel and operating costs than the tall stack alone.

7. The 525' stack will be acceptable under proposed acid rain legislation if designed to be compatible with scrubbing equipment. As a minimum requirement, the stack must be properly lined with materials to resist corrosion from acid and moisture unlike the present 230' stacks.

8. The additional monthly cost to an average electric consumer for both the tall stack and scrubbing equipment would be approximately \$2.15. Numerous letters and comments in the record from the public indicated a willingness to pay such costs for a long range benefit of reducing SO<sub>2</sub> emissions.

9. The EPA-mandated 3 year deadline for achieving compliance with ambient air quality standards under the circumstances of this case is triggered only after a S1P revision incorporating the applicable requirements has been fully approved by EPA.

10. Delmarva Power is free to pursue various SO<sub>2</sub> controls before a final S1P revision has been approved and EPA has expressed on the record its willingness to work with DNREC and Delmarva Power toward a mutually beneficial solution.

11. The reduction of total SO<sub>2</sub> emissions is in the best interests of the citizens of the State of Delaware, especially in light of health benefits, the State's reliance on tourism and the likelihood of federally-mandated emissions reductions in the near future.

12. Section 3.3 of Regulation No. 1, DEFINITIONS AND ADMINISTRATIVE PRINCIPLES, provides the Department with authority to take "any and all actions necessary to maintain a reasonable quality of air throughout the State" in the absence of a regulation.



### III. Order

In view of the above findings, it is hereby ordered as follows:

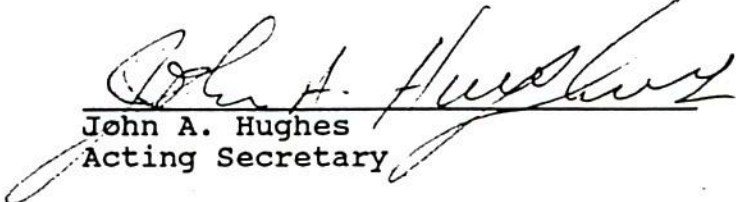
1. That the permit for a stack not less than 500 feet in height be granted to Delmarva Power and that the facility be constructed in accordance with plans and specifications submitted to the Department and set forth in the Permit attached hereto as Exhibit "A."

2. That after December 31, 1989, the coal accepted and received by Delmarva Power at its Indian River Power Plant contain no more than 1.6% sulfur by weight. This requirement shall become null and void whenever flue-gas desulfurization or such other facilities achieving a lower rate of emission from each of Units No. 1 and No. 2 become operable.

3. That in anticipation of new State of Delaware and/or federal acid rain control requirements, Delmarva Power immediately begin preparations for implementing further reductions in the emissions of sulfur oxides and nitrogen oxides from Units Nos. 1, 2 and 3 at its Indian River Power Plant. The Company should consider the installation of flue-gas desulfurization equipment or such other measures capable of achieving a reduction of 90% from the current level of sulfur oxide emissions and a maximum emission rate of 0.5 pound of nitrogen oxides per million BTU of heat input.

IV. Reasons

In an effort to carry out the policies and purposes of 7 Del. C. Chapter 60, especially with respect to utilizing Delaware's air resources for maximum public benefit and protecting public health and safety, it has been determined that reduction of total SO<sub>2</sub> emissions, rather than merely dispersing them, is the wisest course of action under the circumstances of this application, particularly where these benefits can be achieved at relatively low costs to Delmarva Power's customers, many of whom have advocated the slight additional charges to obtain a long range benefit.

  
John A. Hughes  
Acting Secretary

JAH:RRT:vmg:44-43  
89-A-X



EXHIBIT "A"  
Secretary's Order No. 89-A-7

STATE OF DELAWARE  
DEPARTMENT OF NATURAL RESOURCES  
& ENVIRONMENTAL CONTROL  
DIVISION OF AIR & WASTE MANAGEMENT

89 KINGS HIGHWAY  
P.O. Box 1401  
DOVER, DELAWARE 19903

AIR RESOURCES  
SECTION

TELEPHONE: (302) 736-4791

February 15, 1989

Permit: APC - 89/197 - CONSTRUCTION/OPERATION  
Delmarva Power Company  
Two-Flue Chimney  
Units One and Two  
Indian River Power Plant - Millsboro

Delmarva Power Company  
800 King Street  
Wilmington, DE 19899

Attention: Robert Molzahn

Gentlemen:

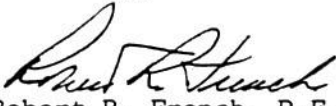
Pursuant to the State of Delaware Regulations Governing the Control of Air Pollution, Regulation No. 2, Section 2, approval of the Department of Natural Resources and Environmental Control is hereby granted for the construction and operation of a two-flue chimney not less than 500 feet in height venting Units 1 and 2 at the Indian River Power Plant in Millsboro, Delaware, in accordance with the application submitted on August 31, 1988, and signed by Ralph E. Klesius

This permit is subject to the following conditions:

1. The project shall be constructed in accordance with the application described above. If changes are necessary, revised plans must be submitted and a supplemental approval issued prior to actual construction.
2. Except as provided in Section 2.9 of Regulation 2, this permit does not authorize the on-line operation of this equipment. When construction or installation is completed, the Division of Air & Waste Management shall be notified.
3. Representatives of the Department of Natural Resources and Environmental Control may, at any reasonable time, inspect such work during its construction.

4. No later than December 31, 1989, the Company shall initiate and continue thereafter an as-received belt sampling system and analytical procedures, which comply with U.S. EPA Method 19, for sampling and analysis of the coal received at the Indian River Power Plant.
5. After December 31, 1989, the Company shall not accept or receive at its Indian River Power Plant, any coal containing more than 1.6% sulfur by weight. This condition shall become null and void in the event that flue-gas desulfurization or such other facilities achieving a lower rate of emission from each of Units 1 and 2 become operational.
6. The Company shall complete construction of the two-flue chimney and initiate its continuing service by March 1, 1992.
7. This permit shall be available on the premises.
8. This permit may be subject to revocation upon violation of any of the preceding conditions.

Sincerely,

  
Robert R. French, P.E.  
Program Administrator

RRF/JC/ja  
JC89006

