NEW YORK STATE BOARD ON ELECTRIC GENERATION
SITING AND THE ENVIRONMENT

In the Matter of the Application of New York State Electric & Gas Corp. and Long Island Lighting Co., pursuant to Article VIII of the Public Service Law, for a Certificate of Environmental Compatibility and Public Need authorizing the construction and operation of a steam electric generating facility at a site in the Town of New Haven, County of Oswego, or at an alternate site in the Town of Stuyvesant, County of Columbia, N.Y.	Case No. 80008

Interrogatories of the Staff of the New York State
Department of Environmental Conservation

AIR QUALITY AND METEOROLOGY

1. (p. 6.1-15, Part III) The definition of the parameter A in the equation for the growth of the TIBL is incorrect. A is dimensional ($m^{\frac{1}{2}}$) and is given by the formula:

$$A = [2R/(\rho Cp\ u\ \Delta\theta/\Delta z]^{\frac{1}{2}}$$

Indicate whether or not the correct formula was used in the analysis. If the incorrect formula was used, provide corrected estimates for fumigation conditions.

2. (p. 6.1-20, Part III) Expand on the methodology for the determination of air quality receptors, showing that the receptors chosen are at the locations of highest expected impact.

3. (p. 6.1-19, Part III) Provide a listing of the emissions inventory used.

4. (p. 6.1-20, Part III) Are the PSD estimated impacts the highest 2nd highest impacts exclusive of background?

5. Indicate the exact location where the diesel emissions are planned to occur.

6. Discuss the construction of a taller auxiliary boiler stack versus possible fuel savings resulting from the use of a higher sulfur fuel oil.

7. (Table 5.6-23, Part III) The highest-2nd highest 24-hour PSD SO_2 increment use is projected to be 75.3 $\mu g/m^3$ at NM Station 6. Show for this 24-hour period that this is the location of highest 24-hour impact. If not, what is the location? What is the proposed facilities contribution to this value?

8. (p. 6.1-18, Part III) Expand on the 12 mph minimum wind speed criteria for evaluation of lake breeze fumigation.

9. What $\partial\theta/\partial z$ was assumed in the stable layer during lake breeze fumigation estimates? What value(s) of R was assumed?

10. (p. 5.6-5, Part III) Provide the expected highest-2nd highest estimated SO_2 PSD impact to be associated with the auxiliary boiler operation.

1. Table 2.1-281 indicates that lake herring were collected in either Catfish or Butterfly Creeks. Tables 2.1-282-2.2-285 show that no lake herring were collected with either the boat electroshocker or the back pack electroshocker, the only gears used in the streams. Please give the number of lake herring captured, size of fish and date of capture in the stream collections.
2. Section 2.2.2.1.6.8 p 2.2-163. Please give reference verifying statement that no historic spawning areas of lake trout occur in the vicinity of Mexico Bay.
3. 316(b) Demonstration. New Haven, Section 7.0. Please explain biological rationale for excluding site specific feeding information on Critical Aquatic Organisms (CAO) alewife, rainbow smelt, gizzard shad, emerald shiner, spottail shiner, trout-perch, threespine-stickleback and tessellated darter. Please supply this information for each of these species specific to Lake Ontario.
4. 316(b) Demonstration. New Haven, Section 7.0. Only 3 larval gizzard shad were collected in the ichthyoplankton studies of 1977 (316(b) p. 7.2-5). However juvenile and adult gizzard shad were numerous (852) in the study area (316(b) p.7.2-5). Please describe and supply references used in the identification of this species and specify the characteristics used to distinguish this species from alewives and rainbow smelt.
5. 316(b) Demonstration - New Haven. Tables 5.4-58-64. These tables do not differentiate between juvenile and adult. Of

the adult spottail shiners collected at New Haven in 1977 what percentage were collected during June and July? What percent of the spottail shiners collected during June and July were gravid?

6. Sec. 74.3(g)(iv) states that the applicant should state the specifications and operating features of special devices proposed for the protection of aquatic biota which would return aquatic biota entering the intake facility to the natural water body or water course without harm. Please provide information on

   a) considerations of this regulation at the New Haven site in the proposed design
   b) reasons for the proposed design
   c) potential designs or operating procedures to return larval, juvenile and adult fishes to ambient lake conditions at New Haven
   d) proposed intake designs and fish return/deflection systems at other south shore Lake Ontario generating stations.

TERRESTRIAL ECOLOGY

1. Section 2.2.1 4.3.3 p. 2.2-51-52. This section references the fact that large numbers of hawks, waterbirds, and black birds migrate around the southern shoreline of Lake Ontario and pass through Oswego County. Please describe any potential effects that cooling towers may have on avian migrations at the New Haven site.

LAND USE AND AESTHETICS

1. (a) Has the applicant analyzed evaporative cooling ponds, spray ponds and spray canals of less than 5,600 acres used in combination with cooling towers of reduced size and capacity from those proposed?

   (b) Please provide such an analysis showing the various reasonable combinations of pond size and tower size/capacity. Include a listing of probable environmental impacts (i.e., fogging) and benefits (reduced size of cooling tower and plume). If the applicant feels that any combination system has severe cost or engineering restrictions, list those limitations in the response.

   (c) Is it possible to utilize evaporative ponds, spray ponds, and spray canals in combination with other cooling modes such as a once through system? If so, please provide an appropriate analysis identical in scope to (b) above.

2. Considering the designation of New Haven as the prime site:

   (a) Has this determination been made by a regional analysis (i.e., Mid Hudson versus Ontario Lowland)?

   (b) Describe the conclusion of the regional analysis if utilized as a site analysis technique.

   (c) Describe the basis of such conclusions.

3. Which of the two sites, Stuyvesant or New Haven is considered superior with respect to each of the following and give the primary reason(s) for such a determination:

   a) land use characteristics and scale

   b) compatibility with adjacent and/or nearby land uses

   c) regional compatibility

   d) recreational land use compatibility

   e) residential land use compatibility

   f) potential and/or perceived scenic qualities

   g) transportation; access

   h) industrial and commercial land use compatibility.

4. Which site, (i.e. Stuyvesant or New Haven) has the greatest potential for a successful landscape composition in the design sense. Give the basis for this determination.

5. Are there any unique features of statewide significance that will be adversely effected by this proposal at either site? List any and describe what the impact might be.
   Considering the balancing of all the environmental, engineering and cost aspects of this proposal, please list each factor that favored New Haven over Stuyvesant and, if possible, assign a relative weight for each factor.

6. Considering the Applicant's characterization of New Haven as rural-industrial (page 2.6-1, Part I Vol. V):

   a) Is the industrial component considered to be the nearby power plants located near Nine Mile Point? If not what is the industrial component?

b) Does the Applicant consider the New Haven Site to be linked in the land use, socioeconomic and aesthetic sense to the facilities at Nine Mile Point?

c) List the possible advantages associated with any such perceived linkage.

d) List the possible disadvantages and balance these against the advantages.

7. On page 2.1-20 of Part I Volume I of the application it is stated that there are "few unique recreational attractions in the 5 mi. around the site, and so...

   What are the few unique recreation areas?

   Why are these considered unique?

   Do they have statewide significance?

   List any resource considered to have statewide significance if any exist at either New Haven or Stuyvesant...

8. Please provide another oblique aerial photo looking SW, WSW, W (figure 2.1-13 Stuyvesant Site) that shows the horizon line.