



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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Daniel F. Caruso
Chairman

November 22, 2010

TO: Parties and Intervenors

FROM: Linda Roberts, Executive Director

RE: **DOCKET NO. 225D** - Kleen Energy Systems, LLC Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a Electric Generating Facility and Switchyard on River Road, Middletown, Connecticut. Reopening of this docket pursuant to Connecticut General Statutes § 4-181a(b) limited to Council consideration of changed conditions and of the attachment of conditions to the certificate consistent with the findings and recommendations in the Executive Report issued by the Thomas Commission.

DOCKET NO. 190A – Meriden Gas Turbines, LLC Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a 530 MW combined cycle generating plant in Meriden, Connecticut. Reopening of this docket pursuant to Connecticut General Statutes § 4-181a(b) limited to Council consideration of changed conditions and of the attachment of conditions to the certificate consistent with the findings and recommendations in the Final Report issued by the Kleen Energy Plant Investigation Review Panel (Nevas Commission) and the findings and recommendations in the Executive Report issued by the Thomas Commission.

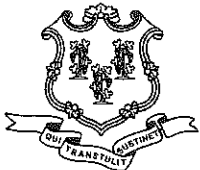
DOCKET NT-2010 - Reopening of final decisions pursuant to C.G.S. §4-181a(b) for jurisdictional natural gas-fired electric generating facilities under C.G.S. §16-50i(a)(3) and C.G.S. §16-50k(a) limited to Council consideration of changed conditions and the attachment of conditions to the certificates and declaratory rulings consistent with the findings and recommendations in the Final Report issued by the Kleen Energy Plant Investigation Review Panel (Nevas Commission) and the findings and recommendations in the Executive Report issued by the Thomas Commission.

Comments have been received from the Department of Public Health, dated November 10, 2010.
A copy of the comments is attached for your review.

LR/laf

Enclosure

c: Council Members



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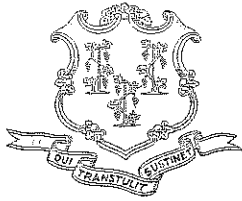
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NOTICE OF SERVICE

I hereby affirm that a photocopy of this document was sent to each Party and Intervenor on the service list dated November 22, 2010 with method of service to each party and intervenor listed via either e-mail or hard-copy on November 23, 2010.

Dated: November 23, 2010

Lisa Fontaine
Custodian of Docket No. NT-2010



STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

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ORIGINAL

CONNECTICUT
SITING COUNCIL

OFFICE OF COMMISSIONER

November 10, 2010

TO: Linda Roberts, Executive Director
Connecticut Siting Council

FROM: J. Robert Galvin, M.D, M.P.H., M.B.A., Commissioner
Connecticut Department of Public Health

RE: Comments in response to:
DOCKET NO. NT-2010 – Reopening of final decisions pursuant to C.G.S. §4-181a(b) for jurisdictional natural gas-fired electric generating facilities.
DOCKET NO. 225D – Kleen Energy Systems, LLC Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of an Electric Generating Facility and Switchyard on River Road, Middletown, Connecticut.
DOCKET NO. 190A – Meriden Gas Turbines, LLC Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a 530 MW combined cycle generating plant in Meriden, Connecticut.

The following comments from the Connecticut Department of Public Health in reference to the Connecticut Siting Council's request for comments and consultation for Docket No. NT-2010 and previously for Dockets No. 225D and 190A are being submitted for your consideration, pursuant to Connecticut General Statutes § 16-50j(h).

As you are aware, the use of an inherently unsafe gas pipe cleaning procedure resulted in an explosion on February 7, 2010 at the Kleen Energy Systems facility under construction, which is similar to the Meriden Gas Turbines facility presently under construction, both of which are being considered for extension by the Connecticut Siting Council. This explosion resulted in the deaths of six workers and significant injuries to many other workers on the construction site that day, and has led our Department to recommend special requirements for future construction and maintenance activities at gas-fueled power plants in our state.

The U.S. Chemical Safety and Hazard Investigation Board (CSB) has provided our Department with information that indicates up to 8 new gas-fueled power plants are scheduled to be commissioned in Connecticut over the next 5 years. The Connecticut Department of Public Health is committed to protecting the health and safety of workers in our state, and as such the Department is recommending that the Connecticut Siting Council attach the following conditions to the continuation of current applications as well as any future applications from gas-fueled power plants in Connecticut. These recommendations refer both to the initial construction phase and any future construction or maintenance activities at these facilities, including but not limited to future servicing or replacing of turbines or gas fuel lines, and any other activities that may require fuel line cleaning or otherwise might cause flammable gas to be released into any indoor or outdoor atmosphere.

1. Prohibit applicants from using flammable gas for the purposes of cleaning fuel gas piping. CSB has asserted that the cleaning of pipes with metered flammable gas represents neither a safer nor a more cost effective method for fuel gas pipe cleaning, but rather is performed for the sake of convenience and timesavings at the expense of safety. In addition, we recommend requiring applicants to specify in their application which specific and inherently safer alternative method of gas pipe cleaning will be used at the facility.



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2. Prohibit applicants from venting flammable gas indoors or outdoors where the gas may form a flammable atmosphere in the vicinity of workers and/or ignition sources.
3. Prohibit applicants from allowing any work activity in areas where the concentration of flammable gas exceeds 10% of the lower explosive limit (LEL) for that gas. Require applicants to provide continuous (as opposed to periodic) monitoring of gas concentrations in areas where a build-up of flammable gas is possible, with audible alarms that sound when the concentration approaches 10% of the LEL.
4. Require applicants at all times to adhere to the code requirements in the most current version of the *National Fuel Gas Code*, as outlined in the National Fire Protection Association Standard 54 (NFPA 54). Currently, gas-fueled power plants and fuel gas piping operated at a pressure over 125 pounds per square inch gauge (psig) are exempted from NFPA 54. However, the presence of this exemption does not mean the standards are not applicable to gas-fueled power plants, but only that they are not currently required by law for use by gas-fueled power plants.
5. Require applicants to adhere to the Occupational Safety and Health Administration (OSHA) Standards for *Process Safety Management of Highly Hazardous Chemicals* (29 CFR § 1910.119). Currently, OSHA's PSM standard exempts flammable liquids or gasses that are used solely for workplace fuel consumption. However, the presence of this exemption does not mean the standards are not applicable to gas-fueled power plants, but only that they are not currently required by law for use by gas-fueled power plants. Natural gas and other flammable gasses are considered "highly hazardous chemicals" and therefore requiring the use of PSM procedures in the construction and operation of gas-fueled power plants is appropriate and applicable.
6. Require applicants to provide an independent Site Safety Manager during the construction phase of the facility to coordinate and ensure the safety of these highly complex construction environments. This Site Safety Manager should be provided with adequate dedicated staff to ensure a culture of safety on the construction site and to provide continuous on-site independent safety monitoring during the construction of the facility.
7. Require applicants to provide to the Connecticut Siting Council as part of their application their flammable gas safety procedures and training activities that specifically involve contractors, workers, and their representatives in the development and decision-making processes.

In addition to these provisions, the Connecticut Department of Public Health requests that the Connecticut Siting Council specifically prohibit, or at least attach conditions to, the inclusion of financial incentives for early completion in construction contracts related to gas-fueled power plants and other facilities under the purview of the Council. Early completion incentives, by their nature, often compel contractors and tradespeople to perform rushed and tired work and result in an emphasis on speed and convenience at the expense of safety. These monetary incentives give both management and labor a financial incentive to overlook the safest way to do the job in favor of the fastest way to do it.

Although no investigative body has determined that tired work was the cause of the explosion at the Middletown combined-cycle plant under construction on February 7, 2010, the vast majority of workers on that site were not directly or indirectly involved with the inherently dangerous "gas blow" cleaning procedure that was taking place that day. Any set of basic safety procedures should have including limiting the number of people working in the vicinity of this potentially explosive environment to those directly involved with the procedure. In fact, investigation reports have indicated that some tradespeople on the site that day removed themselves from the site once

they recognized the potentially hazardous situation that was developing on the site. Unfortunately however, many other workers either did not recognize the potential hazards or were compelled to continue working on-site despite the presence of these hazards.

As part of their investigation, the Connecticut Department of Labor (CT DOL) determined that contractors on the site experiencing the explosion on February 7, 2010 were working an average of 50-90 hours per week during the six months leading up to the explosion. Tired work is a well-recognized occupational hazard and is therefore limited in various ways in the nuclear, aviation, air traffic, marine, rail, nursing, and truck driving industries. CT DOL did not cite any labor law violations related to extensive overtime in their investigation of the explosion on February 7, 2010 because no statutory limitations currently exist on the number of weekly hours worked for workers in either the construction or gas-fueled power plant industries. However, CT DOL did note that "a significant majority of workers employed in the trades were working in excess of 40 hours per week" and that workers for several of the contractors "consistently worked in excess of a standard 40-hour workweek". In addition, CT DOL noted the unusual nature of the hours being worked on this particular construction site, in that their Department "does not routinely encounter time records showing this level of weekly hours worked".

Short of prohibiting early completion incentives outright, the Connecticut Department of Public Health requests that the Council require of its applicants that any financial incentives offered to contractors be contingent on a "zero injury rate". This would mean that any financial incentives for early completion would be forfeited in the event that any of a contractor's employees working on the site incurred an OSHA-recordable injury or illness, as determined by the independent site safety manager. These conditional financial incentives should cause contractors seeking incentives to attach significant weight to performing work both efficiently and safely.

On behalf of our entire Department, I would like to thank the Connecticut Siting Council for its consideration of our recommendations for current and future siting of gas-fueled power generation facilities. If you have any questions or need any further information, please feel free to contact our Occupational Health Unit Supervisor, Tom St. Louis, at (860) 509-7759.

JRG/sm