



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**REGION 2**  
**290 Broadway**  
**New York, NY 10007-1866**

January 25, 2001

John T. Higgins, P.E.  
Chief, Bureau of Stationary Sources  
New York State Department  
of Environmental Conservation  
Division of Air Resources  
Bureau of Stationary Sources  
50 Wolf Road  
Albany, New York 12233-3254

Re: General Electric (GE) Silicones, Waterford, New York

Dear Mr. Higgins:

This is in response to the New York State Department of Environmental Conservation (NYSDEC) letter of November 30, 2000 to EPA Region 2 requesting our assessment of a proposed GE Silicones (GE) project entitled: CHX Heat Exchanger Project. More specifically, GE has requested that their proposed project to construct a heat exchanger prior to venting the flue gases of two existing boilers be exempt from Prevention of Significant Deterioration of Air Quality (PSD) applicability review. It is the desire of GE to classify this project as a "pollution prevention project." GE is not proposing to install any pollution control device nor it is proposing to switch to inherently less polluting fuels. This EPA response was prepared in conjunction with our HQ's Office of Air Quality Planning and Standards (OAQPS), Office of Enforcement and Compliance Assistance (OECA) and Office of General Counsel (OGC).

**Background**

GE Silicones is an existing major stationary source. Boilers 13 and 18 currently vent their flue gases through their own individual stacks. GE proposes to connect the two individual stacks to a third proposed system consisting of a CHX Exchanger with its own separate third stack. In other words, flue gases from Boilers 13 and 18 will either be vented through their own separate stacks or can be directed to a heat exchanger (with no supplementary fuel-fired capability) with its own third stack. Cold water from softeners will be directed to the heat exchanger and the resulting hot water (or steam) will be directed to deaerator units at the facility. According to GE, among the benefits that this arrangement will provided include: reduce steam usage to deaerators,

reduced annual natural gas consumption due to reduced steam generation, and increased energy efficiency of the steam supply system. GE claims that the CHX Heat Exchanger Project is a source reduction (pollution prevention) project and not energy recovery (combustion of waste) which would produce more air pollutants.

GE also states that by making this change, the facility will be able to produce 15,000 lb/hr of more steam while continuing to burn the same amount of fuel as before. Furthermore, GE states that this new “additional steam-producing capacity” is not a “debottlenecking” case at the facility because currently there is 165,000 lb/hr of unused steam capacity available at the facility. That is, GE claims that it is not trying to circumvent the PSD regulations by adding steam capacity which it does not currently require. Therefore, GE states that this proposed project qualifies as a pollution prevention project and is not subject to PSD applicability review.

It is EPA’s understanding that this proposed project is not being undertaken to bring this facility into compliance with a maximum achievable control technology (MACT), reasonably achievable control technology (RACT) or other Clean Air Act requirement.

### **Discussion**

Although EPA is supportive of pollution control and prevention projects and strategies, special care must be taken in classifying a project as a pollution prevention project and in evaluating a project under a pollution control project exclusion. Despite the fact that Boilers 13 and 18 will be more efficient to operate, individual emissions factors from these two boilers will not decrease. Furthermore, due to the increased efficiency of the units (decrease in production costs) one can reasonably expect an increase in utilization for these two boilers that will result in overall higher levels of annual emissions. Therefore, we cannot definitively conclude that this proposed change will eliminate or reduce the release of air pollutants from these two boilers.

On page 7 of the attachment to John S. Seitz’s July 1, 1994 memorandum entitled “Pollution Control Projects and New Source Review (NSR) Applicability,” EPA noted:

In order to limit this exclusion to the subset of pollution prevention projects that will in fact lower annual emissions at a source, permitting authorities should not exclude as pollution control projects any pollution prevention project that can be reasonably expected to result in an increase in the utilization of the affected emissions unit(s). For example, projects which significantly increase capacity, decrease production costs, or improve product marketability can be expected to affect utilization patterns. With these changes, the environment may or may not see a reduction in overall source emissions; it depends on the source's operations after the change, which cannot be predicted with any certainty.

These observations apply directly to GE’s planned changes; the process improvements reasonably could lead the source to increase operations. Where such an increase could occur at a

source that installs pollution control equipment, EPA previously indicated (see PCP Guidance, Attachment at 16) that permitting authorities should presume that the affected unit will operate at its full potential to emit, considering the improvements. This presumption is equally appropriate for pollution prevention projects where operational increases could result. GE can overcome this presumption and confirm its claim that the facility-wide steam usage and annual facility-wide air emissions will decrease by accepting enforceable permit restrictions to ensure this outcome.

## **Conclusion**

According to 40 CFR §52.21 (b)(2)(i), “major modification ...“means any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act.” This proposed project is plainly a physical change and a change in the method of operation, and we do not view the project as in keeping with EPA’s interpretation of the new source review requirements in the July 1, 1994 EPA guidance mentioned above. However, we are not reaching a final determination on whether GE’s project is subject to PSD. In order to make that determination, NYSDEC will need to conduct an “actual-to-potential” test on Boilers 13 and 18 to determine whether or not there will be a significant net emissions increase.

If you have any questions, please contact me at (212) 637-4074 or Frank Jon, of my staff, at (212) 637-4085.

Sincerely,

/s/

Steven C. Riva, Chief  
Permitting Section  
Air Programs Branch

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