

VIA EMAIL

January 12, 2011

Mr. Edward Burns
Supervising Air Quality Specialist
Office of Air Resources
Rhode Island Department of Environmental Management
235 Promenade Street
Providence, Rhode Island 02908-5767

Dear Mr. Burns:

The Narragansett Electric Company d/b/a National Grid (“National Grid”) provides this response to the Rhode Island Department of Environmental Management’s (the “Department”) November 29, 2010 request pursuant to Air Pollution Control Regulation (“APC”) No. 14, “Record Keeping and Reporting” for information regarding activities National Grid performed at its former Tidewater Site (the Site) in Pawtucket last year.¹ The Department requested (1) information on the identity of each “air pollutant-emitting activity” that took place during the dismantling of the gas holders; and (2) “sufficient information to determine if any of the applicable criteria in subsection 9.3.1 of APC Regulation 9 are met or exceeded.” Set forth below is information on each of the Department’s requests. National Grid continues to review the Department’s requests and would appreciate the opportunity to discuss this matter further with you at your convenience.

With respect to the first question, to understand the gas holders’ decontamination processes that may have involved pollutant emitting activities, a description of National Grid’s recent activities is necessary. The Gas Holders Nos. 7 and 8, which last used in the late 1980s by previous owners, each contained approximately a 2 foot layer of denser sludge between the tank shells and an additional 6 to 12 inches of watery sludge from within the former holder interiors. The sludge was from the former gas manufacturing process conducted at the Site. In addition to the sludge, each holder also contained accumulated rainwater. To dismantle the gas holders, National Grid first had to remove this accumulated water and sludge.

The gas holders’ decontamination process involved three steps. First, the accumulated rainwater was pumped out. Second, the remaining sludge that still contained enough liquid to be pumped out was transferred to fractionation (frac) tanks and held so that the liquid could be pumped to a primary clarifier. A polymer was added to the clarifier to precipitate out solids. The liquid was pumped off, and the remaining solids were then transferred to a belt press for further moisture removal. Finally, the sludge that was not liquid enough to be pumped out was washed down with water. A vacuum truck was then used to transfer this sludge to enclosed sludge boxes. The

¹ We thank you for allowing National Grid to submit this response by January 12, 2011.

supernatant liquid in the sludge boxes was pumped out and the remaining sludge was transferred to a sludge mixing pit, where it was mixed with Portland cement to stabilize it for off-site transport and disposal. All solid material resulting from the sludge removal was stored in closed containers prior to being shipped offsite. All treated water was discharged to the Seekonk River under a RIPDES permit.

The primary equipment used in this operation included the vacuum truck, frac tanks, sludge boxes, the primary clarifier, the sludge press, the sludge stabilization mixing pit, and the closed storage containers. All of the equipment used in the process with the exception of the sludge stabilization pit was mobile or portable equipment, skid or trailer mounted or otherwise designed to be transported around the site or to various sites. For example, the filter press used in this project was trailer mounted, the vacuum truck was mobile, and the sludge boxes were modified enclosed roll-offs. No equipment was permanently installed, and all equipment was removed at the conclusion of the project on November 22, 2010. The duration of the entire project was approximately three months.

With respect to the second question on providing information to quantify potential emissions from each of these identified activities, National Grid cannot accurately quantify any emissions. Unlike a manufacturing process or a fuel combustion device, the tank cleaning process did not consist of repeating a specific set of process steps over and over again with a specific set of raw materials or fuels such that emissions could be calculated in any measurable way. The accumulated materials in the gas holders were of heterogeneous composition and varied in their difficulty of removal. The rate of material removal and the level of effort varied considerably as the work progressed, as did the composition of the materials removed on any given day. Furthermore, we were unable to identify any emission factors or other calculation methods that apply here and that would result in a reliable estimate of the emissions from these several processes.

As you know, National Grid performed real-time ambient air monitoring both on-site and at the site perimeter during these activities. National Grid also maintained records on the amount of material removed and processed each day. National Grid provided the air monitoring results to the Department, and met with staff members of the Office of Air Resources to discuss these results. In addition, National Grid provided Daily Field Reports that included a daily accounting of work activities, operating hours and materials processed. The following is a summary of the materials processed during the tank decontamination operation:

- Amount of total liquid sludge removed from the gas holders – 443,340 gallons;
- Amount of total wastewater discharged under the RIPDES permit – 1,041,070 gallons; and
- Amount of solid sludge disposed off-site – 295 tons.

National Grid is preparing a report documenting the gas holder activities, which we plan to submit to the Department during the first quarter of 2011.

As for the potential applicability of the preconstruction permit requirement of APC Regulation 9, National Grid does not believe its activities at the Tidewater Site fall under the permit requirement of APC Regulation 9. The definition of a stationary source is aimed primarily at determining how

the activities at a permanent facility are to be grouped for regulatory purposes (i.e., how many “facilities” or “stationary sources” are represented at a particular location), not what actually constitutes a stationary source for permitting purposes). National Grid’s activities at the Tidewater Site fall into the category of non-routine, short-term construction, maintenance, and cleaning activities for which the Department has not required a preconstruction permit, even where the permanent production or fuel combustion activities at the same facility require such a permit. Some examples of these pollutant-emitting activities where no permit has been required include:

- Non-routine activities to erect and install process equipment, fuel burning equipment, and buildings. For example, during the construction of a power plant or industrial facility, whether a new plant or an addition to an existing plant, there are many activities that might be considered pollutant emitting activities, such as welding, sandblasting, painting, use of adhesives, chemical cleaning of equipment, and gas purging, that have not been subject to permitting, even though the operations of the finished facility are subject to the permitting requirements of Regulation 9.
- Non-routine activities to maintain process equipment such as welding, painting, and the use of adhesives, which have not been subject to permitting, even where such activities that are part of the production process are addressed in a permit issued under Regulation 9.
- Degassing and cleaning of petroleum and chemical storage tanks, which must be performed in order to inspect, maintain, repair or remove the tanks.
- Cleaning and sludge removal at industrial lagoons.
- Excavation of contaminated soils, such as with underground storage tank removal and other remediation activities.

The above, non-regulated activities under the APC Regulations are not isolated cases, but examples of activities that occur in Rhode Island and elsewhere on a regular basis. Indeed, by way of other example, vacuum trucks are widely used in industrial facilities for the cleaning of tanks, pipelines, and other equipment and are also commonly used to remove separate phase product during spill cleanup and soil remediation efforts. It is our understanding that the Department has never required a permit under APC Regulation 9.3.1 when any of these activities has taken place. If that were the case, each project involving a vacuum truck or any of the other activities listed above would have to be evaluated against the thresholds in Section 9.3.1 and most industrial maintenance and cleaning activities, as well as environmental remediation projects, could be subject to regulation and may have gone unregulated now for years. We do not believe that the APC regulations are so broad as to capture these types of activities and, specifically, the activities that National Grid engaged in at the Tidewater site.

We are aware that some states outside of Rhode Island regulate some similar types of activities. But they do not do so by requiring an emissions threshold evaluation and a preconstruction permit, but by requiring specifically identified activities to comply with work practice standards that reduce possible emissions. There are no applicable work practice standards in Rhode Island’s Air

Pollution Control Regulations that similarly apply to tank cleaning operations. Applying Regulation 9 to regulate these types of activities would not only be inconsistent with the Department's regulations, but also with past practice.

National Grid has an extraordinary commitment to environmental protection. In performing the dismantling of these gas holders, which were last used by previous owners over 20 years ago, we addressed a significant environmental concern. While performing this work, we complied with all environmental regulations and local permits and performed the work in a safe and environmentally conscious manner. Again, we are happy to meet with you to discuss this matter further. Please do not hesitate to contact me if you require further information.

Sincerely,

NATIONAL GRID



Michele Leone

Manager, New England Site Investigation and Remediation Program

cc: Terry Gray, RIDEM
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