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Re: Docket Number EERE-2011-BT-STD-0047

Statement by Theodore E. (Rett) Rasmussen III, Vice President

Good morning. I am Rett Rasmussen, Vice President of Rasmussen Iron Works, Inc., also known as Rasmussen Gas Logs & Grills. We are a five generation family business, founded in 1907 by my great-grandfather, a Danish immigrant who opened his blacksmith shop in Whittier, California, where we continue to conduct business today. Among other items, my great-grandfather and grandfather made fireplace tool sets and fireplace screens. In the early 1950s we opened a fireplace retail store in front of our manufacturing shop and among the products we sold were gas log sets. In 1958 my father, TR Rasmussen, who is our current president, created the sand pan gas log burner. Prior to this development, a gas log burner was merely a pipe with holes drilled in it that provided a very harsh, noisy jet of flame. However, the pan burner, which is filled with a graded sand, more evenly distributes the gas, quiets down the gas flow noise and creates a wood-like yellow dancing flame. Over the years this original design has been copied and modified by Rasmussen and competitors alike, and is overwhelmingly the burner design sold in gas log sets to this day.

I grew up in the business. From the age of six until I graduated from high school, I pushed a broom, worked in the metal fabrication shop, sold gas logs, barbeque and fireplace equipment in our retail store, made pick-ups and deliveries, and attended trade shows. I'm a graduate of the US Naval Academy with a degree in engineering, served for 5 1/2 years on active duty as a surface warfare officer, then left the service to rejoin the family business in 1987. For almost 24 years I have designed and manufactured gas log burners and sets, have been involved in industry technical committees that have developed and maintained product standards, and am a Certified Gas Engineer by the American Society of Gas Engineers. I know gas logs. Unfortunately, I was not consulted during the DOE's research into this rule-making. I wish to take this opportunity to address some of the items with which I take issue, based on my extensive experience in the subject matter.

Vented Gas Log sets are a very convenient replacement for all the hassles of burning wood, such as: procuring, chopping, stacking and hauling of the wood; spiders, bugs, and vermin in the woodpile; sparks, ashes, creosote, chimney fires, cleaning and waiting for the embers to die down before going to bed, to name a few. Gas logs sets provide instant on and off, no sparks, a ready fuel supply and look good for the greater proportion of time when a fire is not burning. They are installed in fireplaces in which it is safe to burn wood, which means that they are made of non-combustible material and have a working chimney flue system that will exhaust all of the products of combustion up the chimney rather than into the room. The fireplaces that my products are installed in are not of my making or design. Vented gas log sets are retrofits into somebody else's enclosure.

Quality Products Since 1907

As a replacement for wood-burning, the flames must replicate that of a wood fire to be commercially viable. If not, they will not sell. If gas logs are not sold, more wood will be burned, which is counter to the aims of the agencies responsible for air quality issues. Since 2008, Rasmussen and the Robert H. Peterson Company have administered the Gas Log Purchase Incentive Program for the South Coast Air Quality Management District in Southern California. The provisions of both the April 2010 Final Rule and the Proposed Rule would limit choice by significantly increasing the consumer's cost of a gas log set, and would work counter to the AQMD's desire to have gas log sets replace wood burning. The end result will be either greater burning of wood, or more restrictions on the use of fireplaces. In any of these cases, consumer choice is affected.

The majority of gas log sets are in the 18" to 30" set size range, which is where most gas log manufacturers focus their efforts. However, there is a market of larger wood-burning fireplaces and unusually shaped wood-burning fireplaces, such as multiple sides, varying heights and non-linear openings. We offer standard set sizes from 12- to 96-inches, and go beyond the traditional logs with our FireBalls, FireShapes, FireStones and FireGlitter. We offer a variety of burner designs, the selection of which is dependent on the fireplace size, firebox shape and desired final effect. My point is that a one-size-fits-all approach is not practical to meet the market's needs.

I will now address the various issues:

Issue: 9000 BTU/hour

I take issue with the The April 2010 Final Rule (to which the proposed rule refers) arbitrarily establishing 9000 BTU/hour as the ceiling for a gas fireplace appliance to be "decorative". This is nothing but a category killer, as no gas log set exists at such a low gas input. Assuming that pilot lights consume 1250 BTU/hour as the DOE states in the proposed rule (with which I will take issue later), then your typical gas log set will be an array of seven one and one-half inch long flames. One of Rasmussen's areas of expertise is in making custom sets for large and unusual fireplaces. I can't imagine trying to convince a customer that their seven foot long gas log set with the seven one and one-half inch flames is aesthetically pleasing except to the ultimate of minimalists.

Issue: DOE's Desire to Treat Gas Log Sets Like Gas Fireplace Appliances (my term that encompasses both heater rated and decorative gas fireplaces)

On April 16, 2010, the DOE's Mohammed Kahn published "Frequently Asked Questions: "Vented Hearth Heater" Definition":

"Question #2: Does the definition of "vented hearth heater" cover vented gas log sets?

Answer: No. DOE believes that gas log sets have specific characteristics that differentiate them from gas fireplaces, gas fireplace inserts, and gas stoves. The primary differentiating feature of gas log sets is that they are not constructed as part of an entire enclosure (i.e., there is no surrounding box or viewing pane) or a sealed system. DOE recognizes that by the nature of gas log set construction, they do not provide the same heating function as gas fireplaces, gas fireplace inserts, and gas stoves, which are constructed as enclosed systems, and, thus, DOE believes that gas log sets products are intended to be installed for decorative purposes. DOE's definition states that a vented hearth heater may be "freestanding, recessed, zero clearance, or a gas fireplace insert or stove." DOE does not believe that any of these terms include gas log sets,

which DOE considers as different products from freestanding, recessed, and zero clearance gas fireplaces, gas fireplace inserts, and gas stoves. As a result, DOE interprets its definition of a “vented hearth heater” as not covering vented gas log sets.”

Mr. Kahn correctly points out many of the relevant differences between gas logs and gas fireplace appliances. A recent email received from a consumer points out another set of reasons:

“I hate the ceramic logs that came with my gas fireplace appliance that my builder installed four years ago when I moved into my home. My style is one of blended traditional/contemporary but I never turn the fireplace on because of two reasons:

- 1) the flame is miniscule for the monstrous logs that are there
- 2) the logs are campy and stupid looking and installed behind a pane of glass, a black marble surround and a beautiful white painted full carved mantle.”

She desired to replace her logs with our contemporary shapes that better suited the way her fireplace was finished and her décor. I had to break it to her that she could make no alteration to the fireplace without compromising safety and voiding any warranty and certification; that gas fireplaces are designed as a complete appliance where all components interrelate. Any change in the logs could negatively affect the combustion performance. In short, she was stuck forever with the burner and logs that come with the gas fireplace appliance.

With a vented gas log set in a wood-burning fireplace, she could have changed it out for anything else that she desired. She could achieve the look she desired today, and in the future should she remodel her home in a different theme.

With regard to the proposed exclusions, there are several more differences:

Issue: Product must be certified to a certain ANSI standard

All gas fireplace appliances sold on the market are certified to either ANSI Z21.88 or ANSI Z21.50. Requiring Decorative Gas Fireplace Appliances to be certified to Z21.50 is no hardship – all of them already are. There is no such thing as an “uncertified” gas fireplace appliance, as they incorporate not just the logs and burner, but also the firebox and venting system.

DOE assumes that all gas log sets on the market are certified to ANSI Z21.60. This is far from the truth. Over the past three full years, only 2.3% of all vented gas log sets sold by Rasmussen were certified to ANSI Z21.60. Z21.60 sets are required by some, but not all, jurisdictions on the eastern seaboard, from Virginia through New England. Our lack of Z21.60 sales points out our market weaknesses in the particular jurisdictions that require Z21.60. My sense is that Z21.60 accounts for not more than 20% of total gas log industry sales.

As you move westward, jurisdictions may require test agency listings, but not necessarily to a particular standard, or they may make no standard requirement at all. The predominate standards to which gas log sets are certified are the City of Los Angeles Rule of General Application 2-72 (RGA-2-72) and ANSI Z21.84. Both cover match lighted gas log sets used with natural gas up to 90,000 BTU/hour. Which standard is followed is more an listing agency preference.

Additionally, some jurisdictions require the installation of a safety control, but do not specify that it be an ANSI certified set.

A great proportion of gas log sets carry no certifications, either because their size or design is not covered by an existing standard, or the number of sets sold does not justify the considerable costs of testing, certification and ongoing listing costs. A gas log set without certification does not mean that it is unsafe; it just means that it does not have a listing. In the case of Rasmussen's uncertified sets, they are all made from the same designs, same materials, same construction techniques, same equipment, same quality control and same trained personnel as certified sets. They have the same installation requirements as certified sets. Rasmussen has not remained in business for over 104 years by selling unsafe products.

Our rule of thumb regarding the fireplace enclosures into which a gas log set may be installed is “that if it is safe to burn wood, it is safe to burn a gas log.” UL127 standard for factory-built wood burning fireplaces subjects fireplaces to temperatures several times more than produced by a gas log set. Masonry fireplaces also have the heat resistance required for burning wood. If the fireplace exhausts the products of combustion when burning wood, it will do so with a gas log set. Safety for a gas log set resides more with the enclosure in which it is used, rather than the gas log set itself. Gas log sets, by their very nature, even the crudest of designs, are more controllable than a wood fire.

The requirement for certification of gas log sets to only ANSI Z21.60 demonstrates a lack of market knowledge by DOE and would be overly burdensome and restrictive to the gas log makers. It would represent a sea change to the industry and market. I recommend that this provision be either: (1) struck from the exclusion, as ensuring safety and proper operation, while a noble desire, seems out of scope for an energy conservation measure; or (2) broaden the scope of this provision to include the other standards and uncertified sets whose labeling and instructions require that they be installed in a fireplace in which it is safe to burn wood.

Issue: Banning of Thermostats on Decorative Gas Fireplaces and Gas Logs

I find this issue to be very confusing. DOE admits that decorative products impart warm air into a room, yet wishes to take away an automatic shut-off device that would keep the consumer from over-using their decorative appliance. I think DOE is focused too much on the low-end start up function of thermostats than on the high-end shut-down of the flame. How much warmth a gas log set imparts to the user is dependent on factors beyond the control of the gas log set or manufacturer, such as the efficiency of the wood-burning fireplace, the ambient temperature (both inside and outside) and the level at which the consumer burns his gas log set. With a thermostat, the consumer sets a comfortable temperature setting at which the gas log set cuts off the flame. Without a thermostat, most consumers will burn the unit on high for a short period then decrease the gas flow to a lower flame height for the duration of the use for the evening. Before retiring for the night, they shut off the unit. Consumers use gas log sets in vented wood-burning fireplaces as attended appliances for ambience, with a secondary function of warmth (either from the primal effect of viewing flame, the radiance of the luminous flame, the radiant energy emitted from the logs, or the convected heat of the air warmed by the flame).

Gas log sets are also an excellent source of emergency warmth in the case of a power outage. In areas where electric heat pumps are the primary source of heat, consumers would be cold and dark during ice storms that knock out power lines, except for their gas log sets (unless they too require electricity, such as with electronic ignition systems (to be discussed later)).

While not a big part of the vented gas log set market, this provision limits consumer choice, especially the elderly who may not be as mobile to adjust their gas log set when they wish to stop it from warming their air. I recommend that this provision be stricken from the final rule for gas log sets.

Issue: Language Expressly and Conspicuously Identifying Gas Logs as “Decorative Product: Not for Use as a Heating Appliance.”

Similar to the thermostat issue, that DOE classifies vented gas logs as “vented hearth heaters” yet requires that we identify them as **not** a heating appliance, which might be confusing to the consumer. The impact of adding this language to our materials is mitigated by the overwhelming number of warnings and cautions a consumer confronts on everyday products, including gas logs sets. This would just be one more warning that the consumer would most likely tune out, or read and not heed.

Issue: DOE's Market Research Indicates That Banning Pilot Lights Would Not Impact More Than Three-Quarters of the Gas Log Market.

DOE has made an incorrect assumption here. DOE estimates that about 25% of gas log sets sold are certified to ANSI Z21.60, which requires a safety control, most of which is accomplished by the use of a standing pilot safety control system. DOE then makes that assumption that the remaining 75% of gas log sets “already utilize alternatives to a standing pilot, such as an intermittent pilot or electronic ignition.” During the past three years, Rasmussen's sales of electronic ignition systems (EIS) accounted for about 3.6% of our total vented gas log set sales. My sense is that this is a higher percentage than most if not all of our competitors' sales of EIS. None of the gas log sets sold by Rasmussen with EIS were certified to ANSI Z21.60.

What DOE has failed to identify in their research is the existence of “match-lighted” gas log sets. Match-lighted sets are just that: when the user wishes to use his gas log set, he lights a match (or aim-n-flame type lighter), turns on the gas, and lights the burner. When he is done using the gas log set, he stops the flow of gas by closing the valve. This type of set is in keeping with the spirit and intent of the energy conservation goals, as there is no constant burning pilot light at all, yet match-lighted sets are not covered in this proposed rule. During the past three years, almost 72% of Rasmussen's sales were of match lighted sets. My sense is that the industry average would be about 50% match lighted.

Relating this to the certification issue, ANSI Z21.60 requires that the gas log set be equipped with a safety system that will shutdown the flow of gas to the burner in the event of an interruption in the gas supply or a flameout. Match-lighted sets are not covered under this standard. If prohibited from using standing pilots, then all of our sets must be equipped with EIS. This represents another sea change, a potential “category killer” to the gas log industry and to the consumer, for the following reasons:

- 1) EIS components can cost five to six times more than components used in standing pilot controls.

- 2) EIS will add more than \$650 to the retail price of an otherwise match-lighted set.
- 3) Adding an EIS will more than quadruple the retail price of our least expensive set that we sell. Accordingly, adding an EIS to a gas log set will price most consumers out of the market. I expect gas log sales to plummet should EIS be required across the board.
- 4) Propane sets require the use of a safety shutdown because of the nature of propane. While natural gas is lighter than air and will vent up the chimney in its raw state, propane is heavier than air and will pool, creating an explosion hazard. Propane is usually used in more rural areas. Rural areas tend to be of lower economic stature. Such an increase in price due to the mandating of EIS will disproportionately effect the rural poor.

Adding an EIS to a gas log set presents a very challenging proposition. As stated by Mr. Kahn, gas log sets “are not constructed as part of an entire enclosure.” Gas log manufacturers do not have the voids in the sides or under the floor of the fireplace in which to hide the EIS components. Accordingly, unless the installation is part of a new construction or extensive remodel (both of which are small proportions of gas log sales) and the components can be installed outside of and adjacent to the firebox, the EIS components must be installed in the firebox along with the gas log set. Unfortunately, EIS components are greater in number (valve, control module, wiring, battery pack or transformer) and greater in size than those for a standing pilot. EIS components are also more heat-sensitive than those of a standing pilot system, further complicating the location-of-components issue. If not located properly, the components could become damaged from the heat, potentially creating a safety hazard that certification testing may not identify or prevent.

A further issue with EIS is that they require outside power to operate. Since it is highly unusual for a wood-burning fireplace to have a 110-volt receptacle installed inside of it, batteries must be used to power the functions of the EIS. Unfortunately, batteries are also very heat-sensitive. While we are able to successfully locate batteries in the fireplace to power remote controls for standing pilot systems, the space limitations caused by the EIS components and batteries usually results in the gas log set having to be down-sized in order to provide more room. This detracts from the aesthetic and decorative effect of the gas log set, and will most likely result in decreased sales.

Issue: Pilot Light Consumption

I take exception with DOE's assertion that, on average, continuous pilot energy use is 1,250 BTU/h for vented gas log sets. The average gas consumption for pilot-equipped gas log sets sold by Rasmussen is 662 BTU/hour for simple thermocouple systems (the majority of piloted systems) and 830 BTU/hour for thermopile millivolt systems. My experience is that this is similar with most other gas log manufacturers, and that the FAQs cited as the basis for DOE's pilot consumption figures are incorrect (two of the five sources cited as manufactures are actually dealers; two of them are actually different product lines from the same company; this leaves one true gas log set manufacturer as a source, and their cited consumption of 1500 is abnormal to the industry. Based solely on pilot light consumption, I contend that DOE's energy savings estimates are overstated by at least 40%.

Issue: Pilot light Yearly Usage

DOE contends that pilot lights are operated the same amount of time for both gas fireplace appliances and for gas log sets. It assumes that pilot lights operate year round for 75% of installations and for the remaining 25%, the consumer operates the pilot for one-fourth of the year. I

contend that gas log sets should not be lumped in with gas fireplace appliances for this issue. Pilot lights are more visible and accessible in gas log sets than they are in gas fireplace appliances. Most consumers first light their gas log pilot light when there is a sustained cold (first good cold snap in Autumn), and turn it off when there is a sustained warmth (Spring). Depending on the geographic area, this would result in sustained pilot usage of from four to six months. Based solely on yearly usage assumptions, I contend that DOE has overstated the energy savings by over 65%.

Overall, I contend that DOE has overstated the energy savings estimates by about 105%, just on these two issues.

Whenever I sit on standards technical committees, my radar is always on against proposals that would be so restrictive that they would stifle innovation or damage the market for the products. The proposal to lump gas log sets together with gas fireplace appliances, the horribly incorrect assumptions about the types of gas log controls sold in today's market, and the assumptions that lead to highly overstated energy savings from gas log sets point to a rush to judgment with this proposed rule that will lead to irreparable harm to the gas log industry, which is comprised almost completely of small businesses. Consumers will be severely impacted by a limiting of choice of the types of gas logs and the tremendous increase in price. Frankly, I couldn't have designed a better job or company killer for small business than what this proposal represents.

My lapel pin represents my membership in Rotary International, another organization founded in the early 1900s. Rotarians follow the "Four-Way Test" of the things we think, say or do:

- 1) Is it the TRUTH?
- 2) Is it FAIR to all concerned?
- 3) Will it build GOOD WILL and BETTER FRIENDSHIPS?
- 4) Will it be BENEFICIAL to all concerned.

In my estimation, the proposed rule fails the Four-Way Test. I respectfully recommend that you immediately halt this rule and conduct a more thorough research that is representative of the actual gas log market.

Thank you for the opportunity to present to you. I welcome any questions.