VanNess Feldman LLP

1050 Thomas Jefferson Street, NW
Seventh Floor
Washington, DC 20007
(202) 298-1800 Phone
(202) 338-2416 Fax

September 18, 2015

Administrator Gina McCarthy
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

VIA EMAIL AND FIRST-CLASS MAIL

Dear Administrator McCarthy,

Attached is a petition for administrative reconsideration of the final rule, entitled "*Protection of Stratospheric Ozone: Change of Listing Status for Certain Substitutes Under the Significant New Alternatives Policy Program,*" published at 80 Fed. Reg. 42,870 (July 20, 2015), filed on behalf of Compsys, Inc. and Structural Composites, Inc.

Please do not hesitate to contact me at 202-298-1991 or alh@vnf.com with any questions you may have. Scott M. Lewit, President of Compsys, Inc. and Structural Composites, Inc. may be contacted at 321-252-4566 or slewit@aol.com.

Sincerely,

Andrea Hudson Campbell
Attorney for Compsys, Inc. and
Structural Composites, Inc.

CC: Drusilla Hufford, U.S. EPA, Director, Stratospheric Protection Division, via email
Margaret Sheppard, U.S. EPA, Stratospheric Protection Division, via email
Cindy Newberg, U.S. EPA, Branch Chief, AERB, Office of Air and Radiation, via email
Rebecca Von Dem Hagen, U.S. EPA, Stratospheric Protection Division, via email

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Administrator Gina McCarthy
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

VIA EMAIL AND FIRST-CLASS MAIL

Dear Administrator McCarthy:

This is a petition for administration reconsideration submitted under section 307(d)(7)(B) of the Clean Air Act (CAA). Structural Composites, Inc. is a research and development company focused on engineering and development of composites for marine, military, and other commercial applications. Structural Composites holds a controlling interest in Compsys, Inc., the manufacturer of preform composites under the brand name Prisma. Prisma products are used in a wide variety of marine applications, as well as in commercial refrigerated trucks and other transportation uses. Our composite preforming production process and products require the use of HFC-134a as a foam-blowing agent. Structural Composites and Compsys request that you reconsider certain aspects of the final rule issued at 80 Fed. Reg. 42,870 (July 20, 2015), entitled *"Protection of Stratospheric Ozone: Change of Listing Status for Certain Substitutes Under the Significant New Alternatives Policy Program."*

In the final Significant New Alternatives Policy (SNAP) rule, EPA established various deadlines after which HFC-134a cannot be used, depending on the end-use of the product. EPA did not take final action regarding the use of HFC-134a for use in Rigid Polyurethane (PU) Spray Foam. However, for Rigid Polyurethane Marine Flotation Foam, use of HFC-134a as a blowing agent is deemed "unacceptable" as of January 1, 2020. EPA also did not prohibit the importation of products containing closed cell foams for which HFC-134a was the foam blowing agent.

Structural Composites and Compsys request that EPA clarify the scope of the Rigid Polyurethane Spray Foam end-use. Compsys' product is unique and has characteristics of both "rigid polyurethane spray foam" and "marine flotation foam." Therefore, the applicability of the rule to our product is not clear. Thus, Compsys requests that EPA clarify that the "rigid polyurethane spray foam" end-use includes composite preforming uses, such as Prisma. Compsys further requests that EPA clarify that the designation of HFC-134a as "unacceptable" for use as a Rigid Polyurethane Marine Flotation Foam blowing agent, effective January 1, 2020, does not apply to use of HFC-134a for *structural* marine foam uses—including composite preforming. Structural Composites and Compsys also request that EPA allow the continued use of HFC-134a in composite preforming, without a deadline, until substitutes are identified for this very narrow end-use that has overall greenhouse gas (GHG) reduction benefits when used in marine and on-road transportation applications.

Compsys and Structural Composites also request that EPA reconsider the decision to allow the importation of closed-cell foam products for which HFC-134a was the blowing agent. Allowing such products to be imported while prohibiting the production of items using an almost-identical process in the U.S. will create a massive competitive disadvantage to American companies. By pushing production outside the U.S., the rule would have the unintended effect of increasing the use and emissions of HFC-134a.

I. EPA Must Clarify the Applicability of the Final Rule and Provide a Clear Exemption for HFC-134a Foam Blowing Used in Composite Preforming.

In the final rule, EPA states "blowing agents are approved on an end use basis," and that "the SNAP program considers the following end uses: [...] Rigid PU (spray, commercial refrigeration, and sandwich panels) includes buoyancy foams, insulation for roofing, wall, pipes, metal doors, vending machines, coolers, and refrigerated transport vehicles."[1] EPA then states that the agency is creating narrowed use limits for HFC-134a and blends thereof, as well as other substances, for all foam blowing end-uses except rigid PU spray foam.[2] EPA based the decision to take no final action on a status change for rigid PU spray foam blowing agents because "some of the lower-GWP, flammable alternatives that are listed as acceptable in other foam blowing end-uses, such as C3-C6 hydrocarbons and methylal, are not acceptable for use in rigid PU spray foam," largely due to the flammability of the alternatives, the method of application, and place of use. EPA further states that there are "three main types of rigid PU spray foam: High-pressure two-part spray foam systems, low-pressure two-part spray foam systems, and one-component foam sealants."[3]

EPA also recognized in the final rule the United States Coast Guard requirements that all monohull recreational boats less than 20 feet in length have adequate flotation foam to keep any portion of the boat above the surface of the water when submerged in calm, fresh water for at least 18 hours and when loaded with specified weights.[4] However, EPA did not define "marine flotation foam" anywhere in the final rule, aside from listing "this use separately from spray foam due to the differences in the manner in which the foam is dispensed which make this use more similar to appliance foam and commercial refrigeration foam than spray foam." EPA further stated that the agency's "understanding is that flotation foam is typically injected rather than sprayed."

Compsys submitted comments to EPA during the comment period, as well as after the close of the comment period, explaining that Compsys' Prisma product is neither a typical "spray foam" or "marine flotation foam."[5] Rather, as also detailed in our comments, our unique product has characteristics of both of these end-uses. Prisma products use high-quality fiberglass knit fabrics, 2 PCF flotation grade polyurethane foam, and a polyester veil. The fiberglass knit fabric is placed inside a mold in order to create pre-formed, standard shape and size components. The fiberglass knit fabric also can be shaped directly to form the frame of the hull, hatch, or other component of a boat to create custom products. The polyurethane foam is then sprayed or injected into the mold or frame, and closed out with a patented polyester tie veil interface. Once cured, this patented process creates an extremely strong interface between the fiberglass and foam. It also helps support dynamic loads, resists cracking and wear, and allows the product to be extremely lightweight.

Prisma foam products do not offer only flotation. The patented polyester tie veil interface creates such a strong product that it can be used for structural boat components such as stringers, bulkheads, hull and deck stiffeners, beams, fuel tank supports, structural members, long-span stiffeners, corner

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[1] 80 Fed. Reg at 42,923.
[2] *Id.*
[3] *Id.* at 42,925.
[4] 33 C.F.R. §§ 183.101, 183.105.
[5] *See* Structural Composites Comments, EPA Docket ID No. EPA-HQ-OAR-2014-0198-0172 (Oct. 20, 2014); *see also* ACMA Comments, EPA Docket ID No. EPA-HQ-OAR-2014-0198-0132 (Oct. 20, 2014), and Structural Composites letters to EPA Docket dated April 13, 2015, May 7, 2015, and June 2, 2015.

stiffeners, hull side-to-bottom strengthening, hatch and swim platform reinforcement, insulated compartments and fish boxes. While these components do provide flotation benefits, they also form the structure of the boat. Compsys currently supplies or licenses our technology to more than 30 OEM boat manufacturers. We also have worked with the United States Department of Defense and the United States Navy on applying our technology to military applications. This joint research has found great benefits to use of Prisma in naval applications, including increased fuel efficiency, performance, and payload while reducing overall ship weight. Overall, the characteristics of Prisma offer major environmental benefits, including improved fuel efficiency and reduced GHG emissions. A more detailed discussion of the environmental benefits of our product is provided below.

Compsys and Structural Composites have researched, and continue to investigate, whether alternatives to HFC-134a can be used in our process. We previously phased out HCFC-22 and replaced that substance with HFC-134a. However, we have not yet identified a substitute for HFC-134a. We continue to examine alternatives but urge EPA to continue to allow this end-use, without restriction, until a viable alternative is identified. In addition, EPA vastly underestimated the costs of compliance with the final rule for our industry. We understand that EPA believes it is bound to consider only the difference in costs between a substance and the alternative, and not the costs of manufacturing facility upgrades or changes. However, the compliance costs to our industry are infinite because no alternative currently exists.

EPA did not acknowledge in the final rule that Compsys' product differs greatly from what EPA considered as part of the marine flotation foam end-use, which is used only to provide adequate flotation, or that Compsys' process is not a typical rigid polyurethane spray foam process. Nor did EPA consider the overall environmental and GHG lifetime benefits associated with a lightweight and extremely durable product that can be adapted to a wide variety of transportation, marine, and military uses. Finally, EPA did not take into consideration the fact that no alternative is currently or imminently available for our composite preforming process. Therefore, Compsys urges EPA to reconsider the final rule and clarify that composite preforming using polyurethane spray foam and the patented Prisma process should be classified as a HFC 134a foam blowing end-use for which there are no narrowed use limits or restrictions.

II. Environmental Considerations Support an Exemption for HFC-134a Used as a Foam Blowing Agent in Composite Preforming.

a. Composite Preforming Offers Significant Lifetime GHG Reductions and Improvements in Fuel Economy when Used in Marine and Transportation Applications.

As also discussed in detail in our comments on the proposed rule, Compsys' Prisma product results in significant lifetime GHG reductions and offers measureable improvements in vehicle and engine fuel efficiency. Our research, including that conducted jointly with the Department of Defense and U.S. Navy, indicates that Prisma products can achieve a 40-60% overall reduction in boat weight compared to standard fiberglass construction, without sacrificing hull strength. Lighter-weight boats also achieve better fuel economy—reducing U.S. petroleum consumption, GHG emissions, and emissions of other pollutants of concern. Compsys and Structural Composites found that boats built using our technology achieved up to a 40% improvement in fuel efficiency.

Prisma also has great potential for use in the on-road transportation sector, particularly in refrigerated trailers. Prisma is at least 255% more thermally efficient that current trailer fabrications, leading to

lower usage of on-board cooling technologies, which in turn means lower overall fuel consumption. Because Prisma is so lightweight yet structurally strong, it can be used as structural components in both refrigerated and standard trailers. Lighter-weight trailers also contribute greatly to overall fuel savings, reduced GHG emissions, and lower emissions of other air pollutants. Prisma also can be used to create structural components for flat-bed trailers, truck bodies, buses, recreational vehicles, and other types of vehicles. We provided a detailed discussion of the overall lifetime GHG savings in our comments on the proposed rule.[6]

EPA is currently working on a rule to establish more stringent GHG emission standards for heavy-duty trucks and trailers. Our technology has the potential to offer significant overall GHG reductions and fuel savings for this transportation sector. We therefore urge EPA to carefully consider the relationship between the SNAP program and the heavy-duty GHG rule. If the SNAP rule limits or prohibits the use of HFC-134a as a foam blowing agent for our process, EPA will have eliminated a potential avenue for achieving even greater GHG reductions from the on-road transportation sector.

b. Very Little HFC-134a is Released into the Atmosphere in the Composite Preforming Process.

Our preliminary research indicates that approximately one-tenth of the HFC-134a used in our composite preforming process is released into the atmosphere. Our polyurethane foam is sprayed into a mold that is completely encapsulated in a composite coating. Because of the size of the HFC-134a molecule, it cannot pass through the composite coating. Thus, any HFC-134a that reaches the atmosphere occurs during the spray process. Once the foam is enclosed and fully encapsulated, any HFC-134a retained in the foam will be permanently enclosed.

As a result, the GHG emissions and overall global warming potential associated with HFC-134a use in composite preforming are extremely low. Moreover, such GHG emissions are non-recurring and are negligible in comparison to the overall GHG reductions that will be achieved by improving boat and vehicle fuel economy. Our calculations indicate that use of Prisma preform technology in refrigerated trailers can reduce GHG emissions by approximately 25 tons of CO_2-equivalent per year and 650,000 lbs. of CO_2-equivalent over the useful life of the trailer. Also associated with use of lightweight Prisma products would be hundreds of thousands of gallons of fuel savings.[7]

Due to the great potential for longer-term GHG reductions at the cost of de minimis emissions of HFC-134a from the foam blowing process, Compsys and Structural Composites urge EPA to continue to allow unrestricted use of HFC-134a as a blowing agent for composite preforming.

III. EPA Must Reconsider Allowing the Importation of Products Produced with HFC-134a as the Foam Blowing Agent if Similar Uses Will Be Prohibited Within the U.S.

In the proposed rule, EPA proposed to prohibit the importation of products made with foam if the foam blowing agent for that product and end use was unacceptable for that end-use in the United States. However, EPA changed course in the final rule and will continue to allow the importation of foam products produced with blowing agents that are or will be unacceptable for that end-use in the U.S.,

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[6] *See* Structural Composites Comments, EPA Docket ID No. EPA-HQ-OAR-2014-0198-0172 (Oct. 20, 2014).
[7] *See id.*

even if the closed-cell foam contains blowing agents that are unacceptable in the U.S. Compsys and Structural Composites strongly urge EPA to reconsider this approach.

As EPA well knows, the effect of a substance with global warming potential is the same regardless of where that molecule is released into the atmosphere. Any reductions in GHG emissions that EPA expects to achieve under the SNAP rule may easily be offset by companies moving production of foam blowing operations outside of the U.S. By continuing to allow importation of foam products produced with blowing agents deemed unacceptable in the U.S., the rule may actually lead to the unintended consequence of *increased* overall GHG emissions—albeit outside of the U.S.

Even leaving aside environmental considerations, EPA's decision to continue to allow imported foam products while prohibiting the same manufacturing processes within the U.S. has massive financial and competitive consequences for the foam blowing industry. Companies with operations located solely within the U.S.—including small businesses such as Compsys and Structural Composites—that contribute to the growth and prosperity of the U.S. economy will be put out of business. Multi-national companies or those that have chosen to site manufacturing in other nations with less-stringent environmental standards will prosper. If EPA retains the exemption for imported products, then EPA must reconsider the applicability of the final SNAP rule to products manufactured within the U.S. to avoid bankrupting successful, innovative American small business.

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For all of the foregoing reasons, Compsys and Structural Composites respectfully request that EPA reconsider certain aspects of the final SNAP rule, entitled "*Protection of Stratospheric Ozone: Change of Listing Status for Certain Substitutes Under the Significant New Alternatives Policy Program*" 80 Fed. Reg. 42,870 (July 20, 2015). We look forward to further discussions with EPA on this matter.

Please do not hesitate to contact me at 321-252-4566 or slewit@aol.com with any questions you may have.

Sincerely,

Scott Lewit /AHC

Scott M. Lewit
President
Structural Composites, Inc. and Compsys, Inc.

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