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January 17, 2017

SUBJECT TO FOIA EXEMPTION 4
CONTAINS CONFIDENTIAL BUSINESS INFORMATION

Jan Tierney
U.S. Environmental Protection Agency
USEPA Headquarters
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 2344A
Washington, DC 20460

Dear Ms. Tierney:

Below are Compsys/Structural Composites' responses to the questions contained in your email dated January 9, 2017. We appreciate the opportunity to provide this follow-up information and would be pleased to further discuss any of the answers below.

Q1. Is the Compsys product currently being used in trailers or is that use still in development?

Compsys' product is currently being used in both trailers and in truck bodies. Use of Compsys' product in trailers and truck bodies began in June 2015. We estimate that 2 trailers and 36 truck bodies have been produced to date containing Prisma components. Limited early production truck bodies are being sold to key customers for evaluation. Prisma has been qualified for use in semi-trailer applications and early production is now starting. Compsys currently provides Prisma components to Wabash. Plans are in motion for scale-up at Wabash with the projection to transition the entire van and truck body lines (60,000 annual build rate).

As also noted below, Compsys is in discussions with a global automotive OEM and large US DOD prime with regard to deployment of our technology in those sectors. Testing to determine Prisma's qualification for use in infrastructure projects is progressing; a state DOT report is expected shortly reporting on qualification testing for new bridge construction.

Q2. To the extent it is being developed/used for trailers, is it used solely for refrigerated transport trailers or is it being used for other types of trailers?

Our product is currently used in both refrigerated and "dry" (non-refrigerated) transport trailers, as well as in refrigerated and dry truck bodies. Currently, the use of Prisma is evenly split between refrigerated and dry truck bodies. The trailers that have been produced to date are prototypes and test articles; all have been refrigerated.

As we have explained, use of Prisma in refrigerated trailers and truck bodies provides superior insulation, reducing the amount of cold air that must be generated and circulated within the trailer in order to maintain the necessary temperature. Prisma also is extremely light-weight, compared to traditional wood, metal, or other composite materials, resulting in significant reductions in the amount of fuel used during transport of goods. For both refrigerated and dry trailers, Prisma offers weight reduction, ease of maintenance, and elimination of corrosion, which extends the trailer life cycle. We are projecting a doubling of product life cycle through the elimination of corrosion based on composites long history of in-service durability.

Q3. What kinds of components are produced for use in refrigerated trailers?

Compsys produces components that form the primary structure of the trailer or truck body, whether that trailer or truck body is refrigerated or dry. Prisma components are used to create the floor, chassis, nose wall, roof, and sidewalls, replacing components that were previously made of wood, metal, or other types of composites.

Q4. How does the wall of a trailer, for example, differ from the wall of a trailer that does not use Prisma?

Prisma allows for the construction of a wall that is 100% composite. Prisma elements are co-molded with the composite inner and outer skin into a component meeting the exact size and specifications of the trailer wall. Metal ribs and other metal materials are completely eliminated. Prisma can be used to create the entire sidewall of a trailer, creating a seamless construction.

In contrast, traditional trailer walls constructed of other materials use a metal frame, metal outer skin and a thermoplastic composite inner skin. The metal-framed components can be first installed into the truck, with the foam injected into the cavities in the nearly-complete truck body, or individual metal-framed components can placed into massive foaming jigs and later installed into the truck body. The panels or other components are typically fastened together using metal rivets. The material, systems and the nature of the large foam show results in a panel that has less insulation quality and more weight than the Prisma panel.

Q5. Do you know whether there are other trailers produced using composites that do not use Prisma's process? If you are aware of such use, do you know whether insulation foam is also used if the trailer is used for refrigerated transport?

Other manufacturers use the processes described above, where metal-framed components are injected with foam either in place in the truck body or trailer, or where metal-framed components are individually injected with foam and then assembled into the complete truck body or trailer. We are not aware of any other major manufacturer that is producing all-composite walls and other components the way we are.

As we have previously explained, our use of a fiberglass-reinforced outer fabric is unique and requires the use of foam with different properties from the foams used in metal-framed components. The fiberglass fabric is porous, unlike metal or thermoplastic materials. Therefore, our process must use

a foam that will not permeate the fabric; metal-framed components do not have the same concern with permeation.

Q6. Is the Compsys product currently being used in uses other than boats and trailers? If so, what uses?

Prisma beams are used in composite applications, such as theme park rides, chemical tanks, industrial composites and for the repair and restoration of structure]. These beams and other standard-sized components are available for purchase through an independent distributer and could be used in used in areas that we are not aware of.

Q7. Is it currently being developed for use in other uses? If so, what uses and what is the projection on when it might be actively used?

Compsys/Structural Composites are very active in developing products for use in infrastructure applications, in particular Composite Bridge Decking. The Oklahoma Department of Transportation (DOT) has recently completed extensive testing on a new version of our decking that is targeted to new bridge construction (vs. retrofit). We are also developing applications in the following areas:

- Infrastructure uses—deployment projected prior to 2020.
- Automotive—current project moving from planning to development, expected in 2019.
- Building Construction—targeting Commercial Buildings in the 2020-2022 timeframe.
- Alternative Energy—Compsys' products are already used in some small applications. Further development and deployment is expected in wind energy applications.
- Corrosion Market (chemical tanks)—Compsys' products are currently used in small applications for oil and chemical holding tanks; additional applications are planned and expected in the next few years.
- DOD—Compsys has partnered with the U.S. Department of Defense on a variety of projects using our product. This partnership will be significantly expanding in 2017. Among the existing DOD projects are the following:
    - U.S. Navy, Defense Advanced Research Projects Agency (DARPA) MARITECH Program to develop a composite ship superstructure system; a joint project between Structural Composites, Ingalls Shipbuilding, American Bureau of Shipping, and Naval Sea Systems Command.
    - U.S. Navy Small Business Innovative Research (SBIR) Phase I Program: Development of a New Composite Manufacturing Process for Special Forces Maritime Craft.
    - U.S. Navy SBIR Phase I Program: Energy Absorptive Resin Materials for Undersea Structure Radiated Noise Reduction.
    - U.S. Navy SBIR Phase II Program: Study of Fire Performance of Composite Materials in a Submarine Environment.
    - U.S. Navy SBIR Phase I Program: Effects of Fiber Reinforced Plastic Composites in Submarines.
    - US Navy SBIR Phase I, II, III- Advanced Combatant Craft for Increased Affordability (Structural Composites, Inc).
    - 2016 Award Rapid Innovation fund- SBIR Phase III- Advanced Combatant Craft for increased affordability. 2.7M, 2 year effort- Awarded Sept 2016 (Structural Composites, Inc).

Q8. Is foam currently used in those other uses? If so, how is it applied?

Polyurethane foam is currently used in some of these end-uses, but not in all. In those applications where foam is currently used, the process differs from Compsys' product. As explained above, these applications require a wood or metal frame, and the foam is then injected into the cavities formed by that framing. Our product eliminates the wood or metal framing requirement. Our understanding of the use of foam in the applications currently under development by Compsys/Structural Composites is as follows:

- Infrastructure—foam is not currently used. Composite materials would replace steel and concrete components.
- Automotive—Foam is not currently used the targeted applications. Prisma/composite materials would replace steel and aluminum components.
- Building Construction—Foam or other material is currently used as insulation and is sprayed or injected into wall or ceiling cavities. Prisma would replace the metal or wood framing as well as the spray-foam or other types of insulation with a single component that forms both the structure of the building and provides insulation and noise reduction.
- Alternative Energy—Our targeted applications currently use PVC foam and Balsa core. Polyurethane foam is not widely used.
- Corrosion Market/chemical holding tanks –Polyurethane foam is not generally used in these applications. These tanks are typically constructed of steel, fiberglass, or a combination of those materials.
- DOD—The U.S. Department of Defense currently has very limited uses of polyurethane foam. Our product would replace steel, fiberglass, and other traditional materials in DOD applications.

Q9. Can you better explain how the product is used as a structural component in the end uses for which it is being used? In other words, what part of the structure is being replaced and what material is being replaced (e.g., wood, fiberglass etc) in building boats, in manufacturing refrigerated trailers, and in other uses?

In boats, Prisma forms the skeleton of the boat. Prisma replaces wood, metal, or other heavier and more expensive composite components. In trailers and truck bodies, Prisma is used to form the floor and underlying chassis structure, as well as the roof and walls. These structures were traditionally constructed from wood, metal, fiberglass, or other composites.

To help illustrate how and where Prisma products are used, we have provided the following images. Note that each of the boats pictured is greater than 20 feet in length, meaning that there are no specific marine flotation foam requirements under current United States Coast Guard regulations. As you can see, the Prisma composite foam components are used to form the structure of these boats and is not injected into cavities framed by wood, metal, or fiberglass. The same is true for the use of Prisma components in truck bodies and trailers. Prisma forms the wall, roof, or floor of truck bodies and trailers and is not foam that is injected into the cavities framed by wood or metal structures.

Figure 1. Advanced Design Lightweight Navy Combatant Craft Hull. All of the beams shown in this photo are made of Prisma. These beams replace traditional wooden or other composite framing in the hull.

Figure 2. Transom and Aft Stringer Structure for the Hydrasports 53, the world's Largest Outboard Powered Center Console. These components are Prisma (shown laminated).

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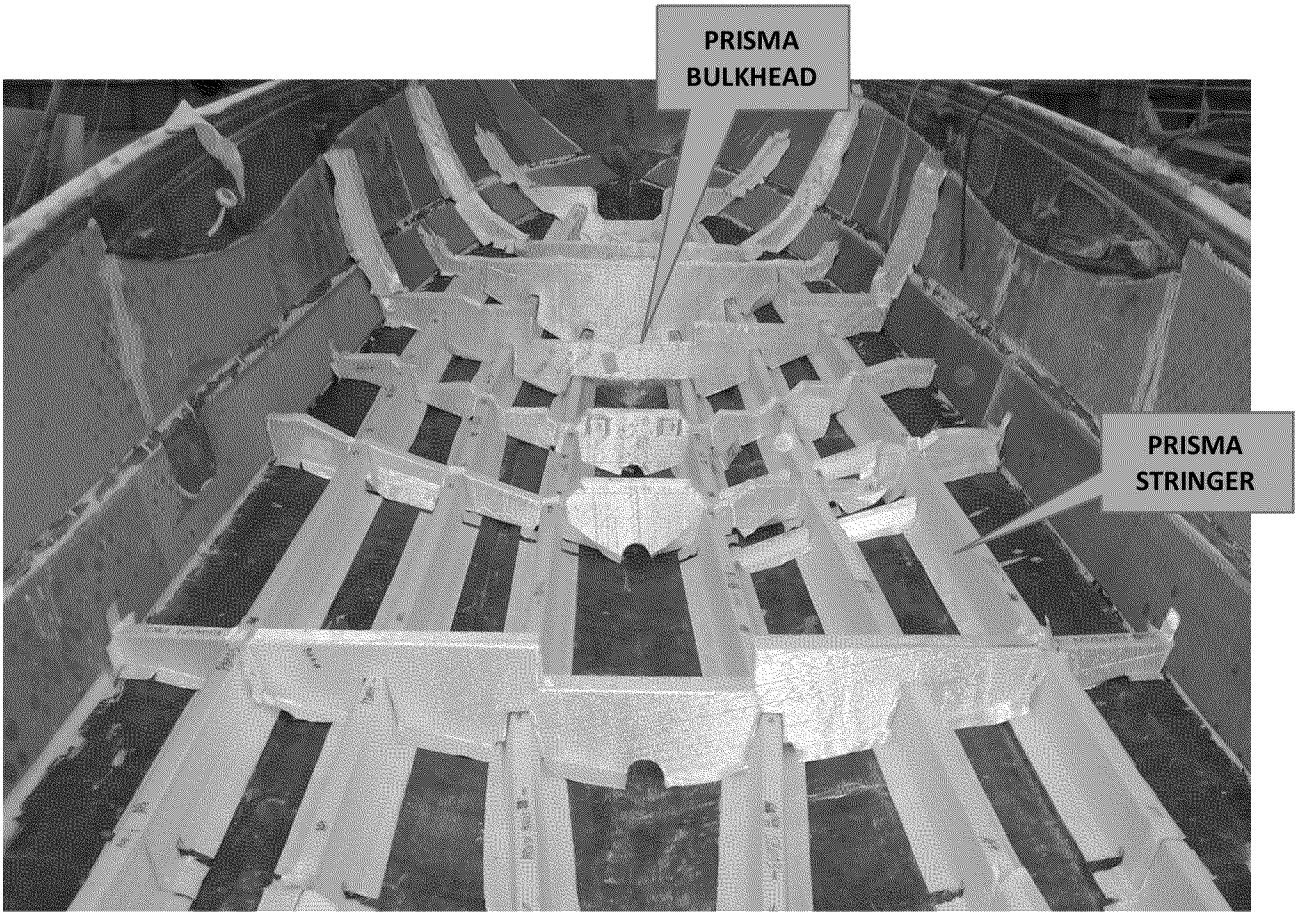

Figure 3. Power Yacht- Prisma System- Brunswick Boats. All of the stringers and bulkhead components shown are made of Prisma. Traditionally, these components would be made of wood, fiberglass, or metal.

Figure 4., Large Boat Prisma System- Wellcraft. Again, the bulkhead and stringers shown are made of Prisma and replace wooden, fiberglass, or other materials.

Figure 5. Large Bulkhead Prisma- Grady White 336. Component is shown before installation into the hull of the boat.

In trailers, Prisma composites are replacing the entire floor chassis structure in both refrigerated and non-refrigerated trailers, as well as the wall and roof structures in refrigerated trailers.

Figure 6. 53 ft Composite Refrigerated Van--Wabash Prisma Construction

Figure 7. Coupler Plate Prisma Framed Floor- Qualification Testing at Wabash- Laminated Prisma Frames

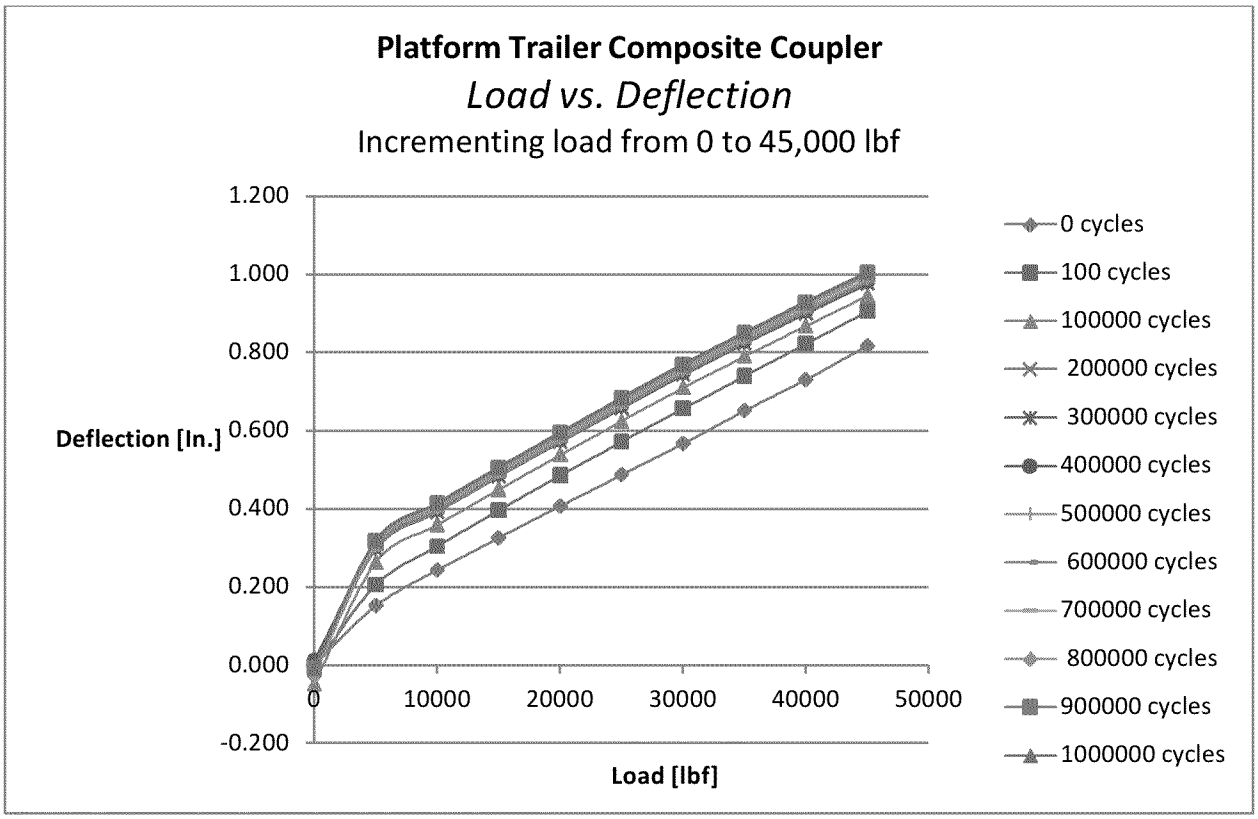

Figure 8. Test Data from Coupler Plate Test

Figure 9. Refrigerated Truck Body- Wabash Prisma Construction

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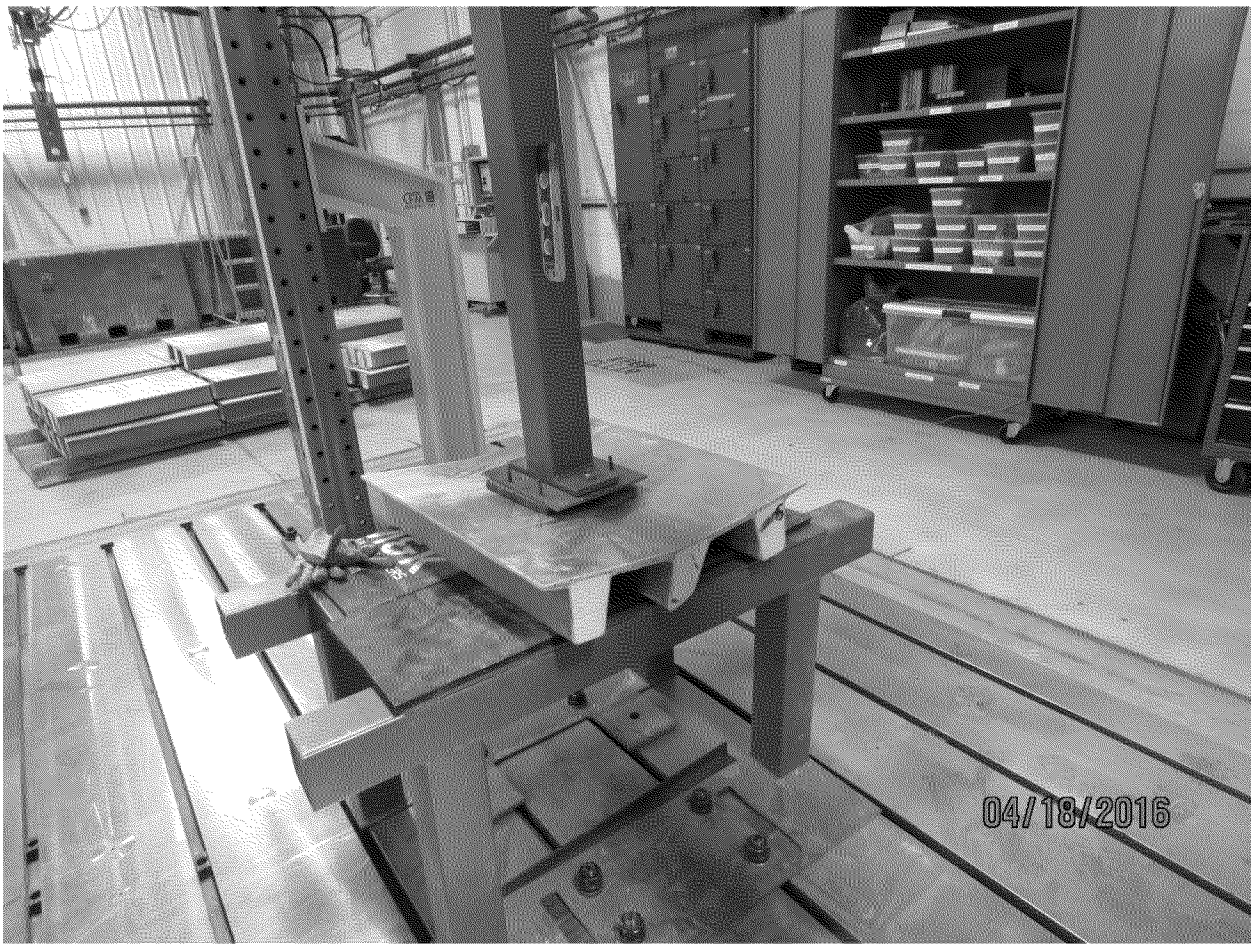

Figure 10. Crush Test- Wabash Prisma. Prisma met all expectations for crush testing and strength for use in Wabash truck bodies and trailers, replacing wood or metal components.

Figure 11. Track Testing to Qualify Technology - Truck Body

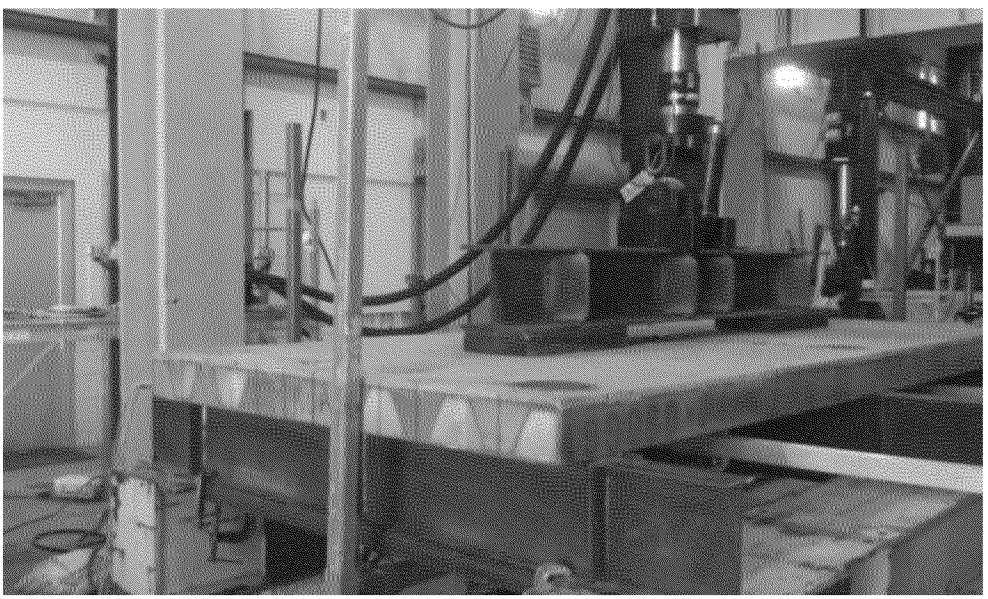

Figure 12. Composite Bridge Decking Undergoing Qualification Testing at Florida DOT

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I hope this letter is responsive to your questions and provides a better understanding of the Prisma products and the way in which these components are used in boats, truck bodies, and trailers, as well as the prospects for future applications of Prisma. Please let me know if you have additional questions or would like to further discuss any of the information provided above.

Sincerely,

Andrea Campbell

Andrea Hudson Campbell

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