

**BOARD OF TAX APPEALS
LOCAL TAX DIVISION**

STATE OF LOUISIANA

**PINNACLE POLYMERS, LLC,
Petitioner**

VERSUS

DOCKET NO. L00357

**ST. JOHN THE BAPTIST PARISH,
SALES AND USE TAX OFFICE,
Respondent**

JUDGMENT

This matter came before the Louisiana Board of Tax Appeals (the “Board”) for a hearing on the merits on November 20, 2018 with Local Tax Judge Cade R. Cole presiding. Participating in the hearing were Russell Stutes, Jr. for St. John the Baptist Parish, Sales and Use Tax Office (the “Collector”) and Robert Burvant and J. Grant Coleman for Pinnacle Polymers, LLC (the “Taxpayer”). After the hearing, the matter was taken under advisement. The Board now issues Judgment in accordance with the written reasons attached herewith.

IT IS ORDERED, ADJUDGED AND DECREED that there be judgment in favor of the Collector and against the Taxpayer on the issue of the purchase of purchase of Avant ZN 203 (\$795,735.06 for sales tax for the purchase of Avant ZN 203 catalyst to be retained by the Collector); and that there be judgment in favor of the Taxpayer and against the Collector for \$25,896.94 in sales tax for the purchase of water and \$51,696.97 as stipulated by the parties, which together with applicable interest shall be refunded to the Taxpayer.

Judgment Rendered and Signed at Baton Rouge, Louisiana this 8th day of
January, 2018.

FOR THE BOARD:

A handwritten signature in blue ink, appearing to read 'C. R. Cole', written over a horizontal line.

LOCAL TAX JUDGE CADE R. COLE

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WRITTEN REASONS FOR JUDGMENT

This matter came before the Louisiana Board of Tax Appeals (the “Board”) for a hearing on the merits on November 20, 2018 with Local Tax Judge Cade R. Cole presiding. Participating in the hearing were Russell Stutes, Jr. for St. John the Baptist Parish, Sales and Use Tax Office (the “Collector”) and Robert Burvant and J. Grant Coleman for Pinnacle Polymers, LLC (the “Taxpayer”). After the hearing, the matter was taken under advisement. The Local Division of the Board now issues the attached Judgment for the following written reasons.

The Taxpayer seeks to recover sales tax paid under protest in the amount of \$795,735.06 for the purchase of a chemical catalyst called *Avant* ZN 203 (“ZN 203”), and \$25,896.94 for the purchase of water. In its Petition, the Taxpayer also requested a refund of sales tax for purchases of various goods and services in the amount of \$51,696.97, and referred to a separate claim for refund. However, at the hearing, the parties stipulated that the purchases of various goods and services were exempt from tax. The parties also stipulated that the matters encompassed in the separate claim for refund will not be adjudicated in this proceeding. The issues

stipulated to will not be discussed further in these written reasons. Thus, the only issues before the Board are the purchases of ZN 203 and water.

The Taxpayer's Vice President of Operations and Plant Manager, Mr. Pieter Swanepoel, testified at the hearing that the Taxpayer manufactures polypropylene for resale. The Taxpayer sells polypropylene in the form of small round pellets. The Taxpayer's customers purchase and shape the pellets into various items, such as plastic food containers and household goods. The Taxpayer can produce polypropylene with varying degrees of flexibility, durability, and heat tolerance, depending on the needs of each customer.

Polypropylene is a polymer. A polymer is a molecule that is made up of several monomers, in this case propylene. The Taxpayer uses a number of chemicals in the process of transforming monomers into polymers. This process is referred to as "polymerization." The first step in the polymerization process takes place in the Taxpayer's fluidized bed reactor. The Taxpayer injects a slurry of ZN 203 and inert oil into the reactor. When it is time to begin the reaction process, ZN 203 and propylene are mixed together and exposed to heat and pressure. During the reaction process, the Taxpayer adds other chemicals, such as hydrogen and tri-ethyl aluminum ("teal") into the mixture to achieve the specific product characteristics desired.

According to the Collector's Exhibit 12, "ZN 203 S SL *Avant* Catalyst Data Sheet," ZN 203 is made up of magnesium chloride supported by Ziegler-Natta catalyst containing chlorinated titanium compounds. ZN 203 causes monomers to combine together to form polymer chains. Taxpayer's expert witness, Dr. Douglas Klendworth, testified that the polymer chains are like long strings of molecules connected end to end. The chains wrap around each other to form tiny lumps of

plastic. Dr. Klendworth compared this molecular structure to a haystack, and compared each individual polymer chain to a single straw. To the naked eye, the polymer looks like a powder when it comes out of the reactor.

Dr. Klendworth testified that ZN 203 is pre-polymerized before it is shipped to the Taxpayer. According to Dr. Klendworth, pre-polymerization entails exposing a portion of ZN 203 to a small amount of teal. ZN 203 reacts with teal by “exchanging” a chloride molecule for a carbon molecule. The carbon molecule bonds with titanium in the ZN 203. This in turn is exposed to a metered amount of propylene to trigger a polymerization reaction. These nascent polymers are dispersed throughout ZN 203, and provide the first building blocks for the real polymerization process, which occurs later in the reactor. Pre-polymerization results in greater structural stability during polymerization. By the end of the process, the pre-polymerized component of ZN 203 is intermingled with the polymer chain molecules and interspersed throughout the polypropylene.

By controlling the balance of monomers, ZN-203, and other chemicals used in the process, the Taxpayer can control the molecular structure and weight of the end product. The molecular weight and structure in turn determines the end product’s flexibility, durability, and heat tolerance. Mr. Swanepoel testified that the Taxpayer specifically uses ZN-203 because it has a narrow molecular structure which allows the taxpayer to imbue polymers with a wide range of characteristics. Mr. Swanepoel further testified that it is the specific characteristics of the finished product, rather than the product’s molecular composition that customers desire. In other words, the Taxpayer’s customers demand polymers with specific degrees of flexibility, strength, and other characteristics. Customers do not demand polymers with specific amounts titanium, chlorides, or other chemicals.

After the reaction phase is complete, the polymers are “hydrolyzed,” *i.e.* treated with steam. Steam renders the remaining titanium and magnesium inert. This prevents those elements from causing further reactions in the finished product. If these elements are not rendered inert, then they can cause discoloration and damage to the polymer after manufacture is complete.

Mr. Swanepoel testified that titanium from ZN 203 can be identified in the finished product by using x-ray fluorescence. ZN 203 is the polymer’s only source of titanium. The other components, such as magnesium and chlorine, can be identified in the final product, but cannot be traced back specifically to ZN 203, as there are other sources of these materials introduced during the manufacturing process. Similarly, the pre-polymerized component of ZN 203 becomes indistinguishable from the other polymer molecules in the finished product.

Dr. Klendworth testified that ZN 203 is a “fifth generation” catalyst. Dr. Klendworth explained that first through third generation catalysts could not be deactivated with steam and required expensive procedures to remove residual catalyst molecules from the end product. Beginning with fourth generation catalysts, however, these expensive treatments were no longer necessary as the catalyst could be rendered inert with much cheaper procedures. Once the costs associated with deactivating catalysts became minimal, developers began looking for new ways to improve their products and obtain a competitive advantage in the market. Thus, development began to focus on creating a catalyst that was not only easy to deactivate but also added some value to the finish product. Fifth generation catalysts are a result of scientific advancement in these endeavors. Fifth generation catalysts, such as ZN 203, offer benefits such as a narrower molecular structure and greater variation in molecular weight.

The final step in the process is called extrusion. In the extrusion process, the powdered polymers are heated, mixed together, and shaped into round pellets. The extrusion process allows the Taxpayer to further refine the desired physical characteristics of the end product. After extrusion, the pellets are stored temporarily in tanks, before being loaded on to rail cars for delivery.

The Taxpayer claims that its purchases of ZN 203 are not taxable under La. R.S. 47:301(10)(c)(i)(aa) (the “further processing exclusion”). The further processing exclusion excludes the sale of materials for further processing into articles of tangible personal property for resale when three criteria are met. Those three criteria are currently codified in La. R.S. 47:301(10)(c)(i)(aa)(I)(aaa)-(ccc):

(I)(aaa) The raw materials become a recognizable and identifiable component of the end product.

(bbb) The raw materials are beneficial to the end product.

(ccc) The raw materials are material for further processing, and as such, are purchased for the purpose of inclusion into the end product.

Our Supreme Court has held that the further processing exclusion was designed “to eliminate the tax on the sale of a material purchased for further processing into finished products and to place the tax on the ultimate consumer of the finished product processed from the raw material.” *BP Oil Co. v. Plaquemines Parish Gov’t*, 93–1109, p. 12 (La. 9/6/94), 651 So.2d 1322, 1330, *on reh’g* (Oct. 13, 1994). The further processing exclusion removes certain transactions from the scope of taxation *ab initio*. *Bridges v. Nelson Indus. Steam Co.*, 2015-1439, p. 7 (La. 5/3/16), 190 So.3d 276, 280, *reh’g denied*, 2015-1439 (La. 9/7/16), 206 So.3d 195 (“*NISCO*”). As an exclusion, any ambiguity is liberally construed in favor of the taxpayer. *Id.* at 281.

The Parties have stipulated that the second prong of the *Bridges* analysis is met in this case. The first and third prongs are in dispute. The first prong asks whether the material has become a recognizable and identifiable component of the end product. The testimony of Mr. Swanepoel established to the Board's satisfaction that titanium from ZN 203 can be identified in the final product using fluorescent lighting. Mr. Swanepoel also testified that the other elements of ZN 203 are identifiable in the final product, even though they cannot be directly traced to the catalyst itself. The Board does not find it necessary to trace each molecule back to the catalyst. It is sufficient that the components of ZN 203 can be recognized and identified in the end-product polymer. Consequently, the Board concludes that ZN 203 becomes a recognizable and identifiable component of the end-product.

The third prong of the test asks whether the raw materials were purchased for the purpose of inclusion in the final product. *NISCO*, 2015-1439, at p. 12, 190 So.3d at 284. Our Supreme Court has explained that inclusion in the final product need not be the *primary* purpose for which the materials are purchased. The Board's analysis must begin with the end product. *Id.* at 282. The Board must then look to the chemical make-up and the physical reactions at play in the manufacturing process. *Id.*

The Taxpayer argues that *Exxon Corp. v. Schofield*, 583 So.2d 1195, 1196 (La. Ct. App. 1991), *writ denied*, 588 So.2d 103 (La. 1991), provides instructive guidance for this case. The relevant dispute in *Exxon* was over the taxability of "initiators and chain transfer agents" under the further processing exclusion. *Exxon*, 583 So.2d at 1196.

On appeal, the First Circuit defined the scope of the further processing exclusion in accordance with the holding of our Supreme Court in *Traigle v. PPG*

Industries, Inc., 332 So.2d 777 (La. 1976). The First Circuit read *Traigle* as applying the exclusion to materials “purchased for the purpose of resale, or for processing *into* the article produced for sale,” thereby forming a “recognizable, integral part of the finished product.” *Exxon*, 583 So.2d at 1197 (emphasis in original). The First Circuit then held that the materials in dispute qualified for the exemption, stating:

We conclude that the initiators and chain transfer agents are chemically linked to the final product and are an essential component of that product in that they affect the specific properties of the polymer produced. As stated by [an expert witness in the field of polymer chemistry], methane is incapable of reacting alone. [The taxpayer] purchased the initiators and chain transfer agents for the purpose of combining them with ethylene, by means of chemical reactions, to produce polyethylene. These chemicals are vital to the manufacture of the 80 different grades of polyethylene pellets.

Exxon, 583 So.2d at 1198 (substitutions added).

The Collector, on the other hand, relies on the case of *Vulcan Foundry, Inc. v. McNamara*, 414 So.2d 1193 (La. 1981). The dispute in *Vulcan* concerned the taxability of coke, a derivative of coal. The taxpayer in that case used the coke in the process of smelting scrap iron for manhole covers and other iron items. Scrap iron loses some of its carbon content in the smelting process. However, the taxpayer needed to replace some of the lost carbon in the finished products to achieve the appropriate grade of iron.

By using coke, which is comprised of 90% carbon, as a heat source for the smelting process, the taxpayer was able to replace some of the lost carbon. To do this, the taxpayer placed layers of coke above and below layers of scrap iron while melting the scrap iron down. A small amount of carbon from the coke transferred into the molten iron. The most critical fact to the Supreme Court, however, was that the coke was purchased for use as a heat source. The Court determined that the addition of carbon to the end product was a secondary benefit of the use of coke.

The Collector's expert witness, Dr. Brian Goodall, testified that although free radicals and catalysts, such as ZN 203, are both used to trigger polymerization, they are as different as "apples" and "oranges." Dr. Goodall testified that free radicals leave recognizable and identifiable component molecules at the ends of the resulting polymer chains. ZN 203, however, does not become a terminal component of the finished polymer chain. The polymer chains in this case end up with hydrogen molecules at the end of their chains, and ZN 203 does not contain hydrogen.

The Board can readily conclude that the Taxpayer purchased ZN 203 to achieve specific molecular weight distributions, and the resulting benefits, in its final products. Achieving the desired physical characteristics was critical for the Taxpayer to make a marketable polymer. However, under the reasoning of *Graphic Packaging*, the third prong of the *International Paper* test does not ask whether a material was purchased for its specific benefits to the final product. Those benefits are more pertinent to the second prong of the *International Paper* test.

A careful reading of *Exxon* leads the Board to conclude that the central dispute in that case concerned the link between the use of free radicals and the resulting benefit to the final product. The connection between the material and the benefit to the final product is properly viewed as an analysis of the second prong of the test. The second prong is not at issue here, because the parties have already stipulated that ZN 203 is beneficial to the final product.

As Dr. Goodall and Mr. Swanepoel testified, the inclusion of pre-polymerized polypropylene in ZN-203 prevents the polymer from losing its shape in the reactor. In this respect, the purpose of pre-polymerization is to provide stability during the polymerization process. The use of a catalyst to cause a reaction is generally not subject to this analysis because it is most often used up in the reaction or separately

removed. The evidence established that after its use in the reaction, the ZN-203 is deactivated by steam so that it becomes a harmless impurity. The evidence established that the optimal amount of catalyst residue was zero, but that there was no ongoing need to remove these trace residues. The purpose of introducing ZN-203 was to serve as a catalyst and cause a reaction, not for the inclusion of even its few trace elements in the final product.

The Collector also asserts that the Taxpayer failed to pay sales and use tax on the purchase of water under the exemption provided in La. R.S. 47:305(D)(1)(c). The Collector relies on the case of *Gard L.L.C. v. Calcasieu Parish School Board*, 96-1520 (La. App. 3 Cir. 4/2/97), 693 So.2d 10. However, La. R.S. 47:305(D)(1)(c) specifically exempts the sale of water from sales tax, only the sale of mineral water, carbonated water, or any water put in bottles, jugs, or containers is not exempt. The Collector argues that the water purchased by the Taxpayer was put in containers when it was stored in the Taxpayer's facility.

At the hearing, Mr. Swanepoel testified that the Taxpayer receives its water from a vendor via pipeline. Mr. Swanepoel identified Taxpayer Exhibit 6 as a copy of the services agreement contract by which the Taxpayer receives its water. The water originates in the Mississippi River. A vendor gathers the river water and "clarifies" it by removing suspended solids. The vendor does not, however, purify the water so that it is safe to drink.

The Taxpayer uses clarified river water to wash railcars and in its cooling tower. The water used in the cooling tower is in constant circulation at a rate of up to 20,000 gallons per minute. At the bottom of the cooling tower, the water collects in a concrete basin. The basin is sloped towards a sump area which contains the bottom ends of two large pumps.

As the water moves through the cooling system, it accumulates salt. If left in the system, the water will eventually become saline enough to damage the Taxpayer's pipes and fixtures. To prevent this, the Taxpayer continuously returns water with a high salt content to the vendor and takes in new water. The water does not stop circulating except during maintenance or an emergency shutdown.

The Collector stresses that the cooling tower that contains the clarified river water has walls, a top, and a bottom. Similarly, the Collector characterizes the basin at the bottom of the cooling tower as a container because it has walls which contain water and does not drain into the ground. The Collector also points out that page 500 of the Taxpayer's own Training Manual, entered into evidence as Collector Exhibit 10, states that the cooling water pressure is controlled by "PV-501-57" which "dumps" back into the basin. Page 470 of the Training Manual defines "[d]ump" as "[t]o remove material from a vessel or container." Thus, the Collector asserts that the cooling tower and the basin constitute containers within the meaning of the exemption.

Gard dealt with the sale of water through a taxpayer's coin-operated vending machine. The machine received water from the local municipal authority through a pipe. The water piped into the vending machine was filtered through a filtration system. The water was then stored in a tank within the machine until it was sold. Customers purchased the water in metered quantities out of a spout. Customers had to bring their own containers to receive the water as it was dispensed.

The trial court found the sale of water to the taxpayer's customers to be exempt, but was reversed by the Third Circuit. The Third Circuit held that these sales were for water placed in a container. It did not matter to the Third Circuit that the taxpayer did not directly place the water in a container itself. The taxpayer

contemplated that its customers would receive water in a container. Had the taxpayer simply sold bottled water, the sales would certainly have been taxable. The taxpayer could not avoid this result by simply not providing a container. As noted by the Third Circuit, the text of the exemption does not specify that any particular person must place the water in a container.

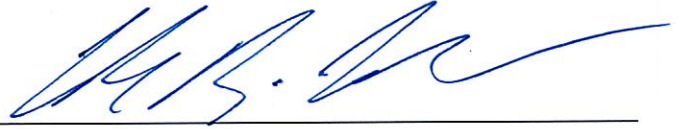
Gard is distinguishable on its facts. The water in *Gard* was carried from the point of sale in a container. This case deals with the purchase of water delivered by pipe. The Taxpayer is not purchasing bottled water. Further, the Taxpayer's operations keep the water in constant circulation; it flows through tanks, pumps, and nozzles. The water in this case does not come to rest absent exceptional circumstances.

The Board recognizes that exemptions are strictly construed against the taxpayer. However, the Board must avoid interpreting statutory language in a manner that leads to absurd results. *See* La. C.C. art. 9. Water is a liquid; it must be contained in something to be useful to a purchaser. If the word container was understood to mean any conceivable structure that could house water, it would be difficult to imagine a transaction that could qualify for the exemption. Even water piped to a residence would cease to be exempt once it was dispensed from a sink faucet into a glass. The Board finds that the water purchased by the Taxpayer was not placed in containers, and is therefore exempt from tax.

Based on the foregoing reasons, the Board finds that the Taxpayer's purchases of ZN 203 were not excluded from tax under the further processing exclusion. The Board finds that the Taxpayer's purchases of water were exempt from tax under La. R.S. 47:305(D)(1)(c). Accordingly, Judgment will be entered in the Collector's favor in part, and the Taxpayer's favor in part.

Baton Rouge, Louisiana this 8th day of January 2018.

FOR THE BOARD:

A handwritten signature in blue ink, appearing to read 'C. R. Cole', written over a horizontal line.

LOCAL TAX JUDGE CADE R. COLE