

Judgment rendered April 4, 2007.
Application for rehearing may be filed
within the delay allowed by Art. 2166,
La. C.C.P.

No. 42,023-CA

COURT OF APPEAL
SECOND CIRCUIT
STATE OF LOUISIANA

* * * * *

INTERNATIONAL PAPER, INC.

Plaintiff-Appellee

Versus

CYNTHIA BRIDGES, SECRETARY
DEPARTMENT OF REVENUE,
STATE OF LOUISIANA

Defendant-Appellant

* * * * *

Appealed from the
Fourth Judicial District Court for the
Parish of Morehouse, Louisiana
Trial Court No. 2003-910

Honorable Alvin R. Sharp, Judge

* * * * *

LOUISIANA DEPARTMENT OF
REVENUE, LEGAL DIVISION

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* * * * *

Before STEWART, MOORE and LOLLEY, JJ.

MOORE, J.

The Louisiana Department of Revenue (“DOR”) appeals the judgment of the district court that affirmed a ruling from the Board of Tax Appeals (“Board”) which held that International Paper, Inc. (“IP”) is entitled to a refund of state sales and use taxes it paid on the purchases of three chemicals used in the manufacture of white paper. For the reasons stated herein, we reverse.

Facts and Procedural History

The somewhat confusing condition of the exhibit record on appeal prohibits a precise factual recitation of the historical and procedural events prior to the appeal in this case.¹ Nevertheless, we are able to piece together what we believe to be a substantially correct exposition of this dispute.

Early in 1997, a representative of IP (who was unnamed) requested a legal opinion from the Revenue Tax Analyst of the DOR regarding applicability of Louisiana sales and use tax on certain chemicals purchased and used to manufacture white paper. The request sought confirmation of its position that, as a result of the manner in which the chemicals in question become integrated into and benefit the finished product, they are exempt from the Louisiana sales and use tax. The chemicals in question were sodium chlorate, oxygen, and hydrogen peroxide. The author of the letter argued that because the chemicals are recognizable and identifiable components of the final paper products, they should be treated as products for resale and not subject to sales and use tax, rather than treated as

¹Most of the relevant materials of the record are contained in two volumes of exhibits, of which there is no table of contents, the pages are unnumbered, and the documents generally do not follow a chronological order or any other format we can glean.

processing chemicals subject to the tax.

The DOR responded by letter dated October 31, 1997, stating that it had previously reviewed the applicability of sales and use tax to paper-making chemicals in the 1970s. The review resulted in the confection of an agreement signed by most companies in the industry. Under that agreement, the chemicals used in the bleaching and whitening process of making paper, including the three chemicals in question, were taxable because the primary intended purpose of the chemicals is for bleaching and whitening rather than as components of paper products. DOR said that the “primary intended purpose” governed taxability, and the DOR would continue to follow the written agreement that bleaching chemicals are taxable.

Shortly thereafter, in mid-December of 1997, IP’s Sales and Use Tax Manager sent a letter to the director of the Sales Tax Division of the Louisiana Department of Revenue requesting a refund of \$859,846.57² plus interest. This amount represented total sales and use taxes IP paid for its purchases of the three chemicals – sodium chlorate, oxygen, and hydrogen peroxide – during the period in question. IP alleged that the chemicals are used in the process of making paper and that they remain in and provide benefit to the final product. The alleged overpayment was made by the IP mill in Bastrop, Louisiana, during the period between January 1, 1995 through March 31, 1997.³

²The original refund requested was a sum over one million dollars and included taxes paid on additional chemicals which were later dropped from the request. This amount was later adjusted to the amount stated above.

³There is some confusion regarding the dates of the refund period. The original letter from IP states that the refund period is from January 1, 1994 until the end of March, 1997. In their brief, the state argues that the refund period is from January 1, 1995 through March, 1997,

After the DOR turned down IP's request for a refund, IP petitioned (not in the record) the Board of Tax Appeals ("Board") to resolve the dispute. The matter was docketed, and a hearing was held on June 10, 2003, after which, the Board took the matter under advisement. The Board issued its Written Reasons for Judgment on October 28, 2003, wherein it held that IP was entitled to a refund of the sales and use taxes it paid from January 1, 1995 to March 31, 1997 on the purchase of sodium chlorate, hydrogen peroxide and elemental oxygen (the "Raw Materials"). A judgment in the amount of \$738,908.81 plus interest was signed on May 6, 2004. The Board made the following findings of fact and conclusions of law in its Written Reasons for Judgment:

The Issue of IP's Purchasing Chemical for Further Processing. IP has a manufacturing facility in Bastrop, Louisiana. At that facility IP manufactures light-weight grades of paper for sale to its customers. In the process of making this paper IP converts raw timber into finished paper products. IP converts raw and wood chips into pulp. The raw wood is composed of fiber. The fiber is composed of a number of elements including polymers, lignin, cellulose and hemicellulose. The lignin holds the cells together. The wood is initially processed into brown pulp using the Kraft process. After the Kraft process, the lignin remaining in the pulp causes it to be brown which is unsuitable for the grades of paper that IP produces at the Bastrop facility. To remove the brown color from the pulp, IP uses a process designed to bleach the brown color from the residual lignin in the pulp. The bleaching process is called "short sequence bleaching". It is the chemical reactions in the bleaching process that are the issue before the Board.

The chemicals at issue are sodium chlorate, hydrogen peroxide and elemental oxygen (the Raw Materials). The sodium chlorate is used to generate chlorine dioxide, which together with the hydrogen peroxide and the elemental oxygen

and it alleges that the district court erroneously listed the period as beginning on January 1, 1994, although even in its own "Petition for Judicial Review" the state dates the refund period as beginning on January 1, 1994. However, the monthly reports sent by IP to the DOR regarding the monthly amounts of overpaid taxes for each chemical begin January of 1995 and end with March of 1997.

are used in the bleaching process. Along with the chemical changes that are brought about by the oxidizing agents, oxygen atoms are bonded to the pulp, especially to the lignin. The incorporation of the oxygen atoms into the molecular structure of the pulp during the bleaching process improves the quality of the pulp and lightens its color to make it suitable for the manufacture of the type of paper that IP seeks to produce.

The question at issue is whether the Raw Materials purchased by IP to oxidize the pulp are “purchases for further processing” and therefore excluded from the sales and use tax. LSA-R.S. 47:301(10)(c)(i) states: “The term ‘sale at retail’ shall not include sales of materials for further processing into articles of tangible personal property for sale at retail...” The Secretary’s regulation, LAC 61:14301(10) and the case law provides that in order to be “material for further processing,” as contemplated by the above statute, the raw materials or their component molecular parts must meet three criteria: (1) they must be of benefit to the end product; (2) they must be a recognizable and identifiable component of the end product, and (3) they must have been purchased for the purpose of reprocessing into the end product.

Here the question is whether the Raw Materials meet the three requirements stated above. Both parties produced experts on the bleaching process who testified at the hearing before the Board. The experts were in agreement on many things. During the initial “cooking” phase, the Kraft Process, much of the lignin is removed from the raw pulp, but there remains approximately 3.5% to 4.5% lignin in the pulp at that stage, depending on whether the pulp was made from soft wood or hard wood. The problem with the lignin is that it gives a brown color to the pulp which is not satisfactory for the high quality white paper that IP seeks to produce.

The bleaching process is to turn the brown pulp white. It also makes the pulp stronger. This is done by the “short sequence bleaching process” that oxidizes the lignin in the brown pulp. To turn the brown pulp white, two things are done to the lignin. One is to remove chromophores that give the lignin the brown color and the other is to bleach the chromophores in the lignin white. All of the lignin can not be removed because if it was then the cellulose would be damaged and the paper would not be usable. IP’s expert testified that IP would like to keep as much lignin in the pulp as possible and still get the desired properties because that would yield more paper. The bleaching process, in essence, bleaches lignin.[sic] The end product is oxidized lignin. After the bleaching process the remaining lignin is approximately 1% to 1.5% of the pulp. The bleaching process removes 50% to 75% of the lignin from

the pulp.

Both of the experts that testified agreed that the pulp acquired additional oxygen in the process but disagreed on the source of the oxygen. The expert for IP testified that the source of the oxygen definitely was from the Raw Materials at issue. He also admitted that some of the oxygen in the bleached pulp came from water used in the process. IP's expert referred to chemical equations that showed that the oxygen from the Raw Materials ended up in the bleached pulp and referred to the writing of other experts in the same field who had performed experiments that proved the same. The expert for the Secretary testified that the source of the oxygen could have been the Raw Materials but that it could also have been the water that is used in the bleaching process. The bottom line is that both experts testified that oxygen from the Raw Materials ended up in the bleached pulp but the expert for IP testified that he knew that fact to a certainty and the expert for the state testified that some of oxygen from of [sic] the Raw Materials ended up in the bleached pulp but the source of the oxygen was just a matter of chance.

The evidence presented to the Board leads it to the following conclusions. The Raw Materials purchased by IP were purchased to be used in the bleaching process. Oxygen is the primary ingredient used in the bleaching process and the Raw Materials were a primary source of that oxygen. A significant amount of the oxygen from the Raw Materials ended up in the bleached pulp and are recognizable and identifiable. The oxygen from the Raw Materials is beneficial to the bleached pulp and those benefits are by design.

It is the ruling of the Board that under the circumstances of this particular case, considering that it is the intention of IP to oxidize the raw pulp and acquire the Raw Materials for the purpose of getting a source of oxygen, the fact that some, of the oxygen in the finished product may come from water does not mean that the Raw Materials are not for further processing as contemplated by the above statute. Therefore, it is the ruling of the Board that the sodium chlorate, hydrogen peroxide and elemental oxygen are purchased for further processing.

The Secretary asserts that IP was a party to an Agreement made in 1984 wherein it agreed that the Raw Materials would be subject to the sales tax. At the hearing, the Secretary was not able to produce a copy of the Agreement. The hearing was held open to allow the Secretary to find and introduce the Agreement if it could be found. Now, the Secretary has located a copy of the Agreement and seeks to introduce it into the record. IP objects to its introduction. The objection is overruled and the Agreement is hereby introduced

into evidence.

The evidence presented at the hearing was uncontradicted that the bleaching process, at the time of the Agreement, used chlorine and the then-used process removed all of the lignin from the pulp. The process that is now used and was used during the period for which the refund is sought, the “short sequence bleaching process”, is materially different. In this newer process the lignin is not completely removed but as much is retained as possible. It is in the remaining lignin that the oxygen in question is found. The Agreement is therefore irrelevant to this case.

Following the Board’s ruling, DOR filed a “Petition for Judicial Review” in the Fourth Judicial District Court in Morehouse Parish on November 24, 2003, pursuant to La. R.S. 47:1435 and 47:1436(3). The matter was argued at a hearing on August 7, 2006, and the district court took the matter under advisement. The court issued its “Reasons For Judgment” on September 7, 2006, in which it stated that it found no manifest error in the factual findings of the board and that the ruling of the Board is affirmed. A Judgment was signed on September 20, 2006, and “Notice of Judgment” sent on September 22, 2006.

The DOR filed this appeal on October 2, 2006, raising three assignments of error: (1) that the district court failed to reverse the Board’s incorrect application of the law to the facts by failing to apply the Supreme Court’s “primary purpose” test; (2) that the district court failed to reverse the decision of the Board in the instant case even though the Board subsequently reached a different conclusion in a subsequent IP case involving the same issues and chemicals but a different refund period. DOR argues that the Board in the latter case did apply the “primary purpose” test; and, (3) the district court erred in its apparent agreement with the Board that the 1984 Agreement is irrelevant.

Regarding the DOR's second assignment of error, we observe that a hearing before the Board of Tax Appeals was held on June 20, 2006, regarding a request by IP for recovery of over two million dollars in sales and use taxes that it paid on the purchase of materials used in three of its mills, including the mill in Bastrop. Included among the eight chemicals in question in that case, including water, were the same three chemicals at issue herein. IP made the same claim that the chemicals are used for further processing into articles of tangible personal property for sale at retail. Only the tax period for the requested refund was different. The Board issued its Reasons For Ruling on October 18, 2006, six weeks after the district court's ruling in the case *sub judice*, holding that under the test of the Louisiana Supreme Court in *Vulcan Foundry, Inc. v. McNamara*, 414 So. 2d (La. 1982), the "principal purpose" for which the materials in question are purchased is, as a matter of fact, for processing the final paper product and not for further processing into articles of tangible personal property for sale at retail. Accordingly, IP's request for refund was denied. IP has appealed the ruling to the district court.

Discussion

We review this case as a second court of appellate review. The Fourth Judicial District Court is vested with the power of review of the decision of the Board of Tax Appeals. La. Const. Art. V, § 16; La. R.S. 47:1434-35. Thereafter, the ruling of the district court is subject to appellate review by suspensive appeal to this court, in the exercise of appellate jurisdiction over civil matters. La. Const. Art. V, § 10; La. R.S. 47:1435.

Judicial review of a decision of the Board is rendered upon the record as made before the board and is limited to facts developed in the record and questions of law. The Board's findings of fact should be accepted where there is substantial evidence in the record to support them and should not be set aside unless they are manifestly erroneous in view of the evidence on the entire record. *Marathon Pipe Line Company v. Crawford*, 2000-2753, p. 5 (La. App. 1 Cir. 2/15/02), 808 So. 2d 873, 877, *writ denied*, 2002-0804 (La. 6/7/02), 818 So. 2d 774; *see also* La. R.S. 47:1434. With regard to questions of law, the judgment of the Board should be affirmed if the Board has correctly applied the law and has adhered to the correct procedural standards. *Secretary, Department of Revenue v. Calcasieu Refining Company*, 2000-1735, p. 6 (La. App. 1 Cir. 9/28/01), 809 So. 2d 1023, 1028.

Louisiana Revised Statute 47:1435 addresses appeals involving tax board decisions and provides, as follows:

The district courts shall have exclusive jurisdiction to review the decisions or judgments of the board, and the judgment of any such court shall be subject to further appeal, suspensive only, in accordance with law. If a suspensive appeal is taken from a judgment of the district court no further bond need be posted and the bond originally posted remains in full force and effect to guarantee the payment of any tax, interest, and penalty until final decision of the court.

Upon such review, such courts shall have the power to affirm or, if the decision or judgment of the board is not in accordance with law, to modify, or to reverse the decision or judgment of the board, with or without remanding the case for further proceedings as justice may require.

Louisiana imposes a tax on all retail sales, which are defined as sales to a consumer or to any other person for any purpose other than for resale as tangible personal property. La. R.S. 47:302 and 47:301(10). The statute

also defines “Tangible personal property” as personal property which may be seen, weighed, measured, felt or touched, or is in any other manner perceptible to the senses. La. R.S. 47:301(10)(c)(i)(aa) states that the term “sale at retail” does not include sale of materials for further processing into articles of tangible personal property for sale at retail. This exception to the retail sales tax is sometimes called the “reprocessing exception.” The question in this case is whether the three chemicals, sodium chlorate, hydrogen peroxide and elemental oxygen, which were purchased and used by IP in an oxidation process, qualify under the reprocessing exception of La. R.S. 47:301(10)(c)(i)(aa). IP contends that the process using the chemicals is designed to turn “cooked” wood pulp from its natural brown color into the material it needs to make “white paper.” This process, it contends, meets the requirements of “purchases for further processing” because the chemicals were purchased to make the final paper product whiter and stronger, and as a result of the “reprocessing” of these chemicals, identifiable components of the chemicals, namely oxygen atoms, are present in the final product.

By its first two assignments of error, the DOR alleges that the district court erred by failing to reverse the Board on grounds of legal error for the Board’s failure to apply the “primary purpose” test in its determination, and the district court erred by failing to follow a more recent Board ruling applying the “primary purpose” test and ruling in favor of the DOR in an IP case involving the same issues, the same process, and the same chemicals, but a different refund period.

DOR’s second assignment of error is that the district court was bound to follow a subsequent decision of the Board, has no merit. As stated above,

judicial review of a decision of the Board is rendered upon the record as made before the board and is limited to facts developed in the record and questions of law. The recent decision in question by the Board was not before the district court, nor had the ruling of the Board been rendered when the district court affirmed the Board's first ruling.

Nor does the later decision of the Board have a reverse *stare decisis* or *res judicata* effect either on the prior Board decision or on subsequent judicial review of the prior ruling. It is well settled that administrative agencies are not bound by prior determinations, and their decisions may not be set aside merely because the agency has, on an earlier occasion, reached a contrary result. *Permian Basin Area Rate Cases*, 390 U.S. 747, 88 S. Ct. 1344, 20 L. Ed. 2d 312 (1968). Likewise, they are free from the application of the judicial doctrine of *res judicata* even though the agency was performing a judicial function in making the determination. 73 C.J.S. Verbo, Public Administrative Bodies and Procedure s 147. On the other hand, the district court has exclusive appellate jurisdiction over decisions of the Board. It is under no compulsion to "rubber stamp" Board decisions. While the district court or court of appeal may consider prior or subsequent rulings of the Board, they have no precedential authority.

While the courts may take prior determinations into consideration, an administrative agency is not bound by its own prior determinations; and an administrative determination in which is imbedded a legal question open to judicial review does not impliedly foreclose the administrative agency, after its error has been corrected, from enforcing the legislative policy committed to its charge. The doctrine of *res judicata* in the strict sense, so as to affect a subsequent judicial action, especially is not applicable to determinations

which are not judicial or quasi-judicial or with respect to the determinations of agencies which do not have the power to make a final determination.

Kidd v. Board of Trustees of Teachers' Retirement System of Louisiana, 294 So. 2d 265 (La. App. 1 Cir. 1974), *writ denied*, 301 So. 2d 46 (La. 1974).

DOR's first assignment of error alleges that the Board failed to apply the "primary purpose" test in its decision, and the district court erred by failing to reverse on that ground. For the following reasons, after review of the record and testimony, we conclude that while the Board ostensibly applied a "purpose" test, its conclusion that the purpose of the "short sequence bleaching" process in which the chemicals in question were used was to process the chemicals in question into the final product was clearly wrong both as a matter of fact and as a matter of law.

In order for the reprocessing exception to apply, four requirements must be met: (1) the material itself must be processed into tangible personal property for sale at retail, (2) the material must become a recognizable, integral part of the end product, (3) the presence of the material as a component of the end product must be of benefit to the end product, (4) the primary purpose for the purchase of the material must be to process it into the end product. The source of these elements include the jurisprudence and the Louisiana Administrative Code. LAC 61:I.4301(C)(*Retail Sales or Sale at Retail*)(d) reads:

Sales of materials for further processing into articles of tangible personal property for subsequent sale at retail do not constitute retail sales. This exemption does not cover materials which are used in any process by which tangible personal property is produced, but only those materials which themselves are further processed into tangible personal property. Whether materials are further processed or simply used in the processing activity will depend entirely upon an analysis of the end product. Although any particular materials may be fully used,

consumed, absorbed, dissipated or otherwise completely disappear during processing, if it does not become a recognizable and identifiable component which is of some benefit to the end product, it is not exempt under this provision. The fact that a material remained as a recognizable component of an end product by accident because the cost of removal from the end product was prohibitive, or for any other reason, if it does not benefit the property by its presence, it was not material for further processing and the sale is not exempt under this provision.

The “primary purpose” test appears to be of jurisprudential origin. The leading cases on this element of the analysis are *Traigle v. PPG Industries, Inc.*, 332 So. 2d 777 (La. 1978), and *Vulcan Foundry, Inc. v. McNamara*, 414 So. 2d 1193 (La. 1982).

In *PPG Industries*, the issue was whether the purchases of graphite plates used by a chemical manufacturer in producing chlorine gas for retail sale were exempt from taxation under the reprocessing exception because graphite from the anodes appeared in the final chlorine gas product. The graphite blades were used to make anodes so that electricity could pass through salt water brine in such a way as to break down the brine into its component parts. During this process, the graphite blades were consumed, but about sixty percent of the original anodes were present in the finished product. The presence of the graphite in the final product was a by-product of the process of making the chlorine, and it was not economically feasible to remove it. The district court ruled that sales taxes were due on the graphite anodes. The Third Circuit Court of Appeal reversed, holding that the taxes were not due. The Supreme Court granted writs, and reinstated the district court judgment. In its ruling it held that a reasonable interpretation of the reprocessing exception to the retail sales tax statute “is that the substance cannot be regarded as purchased for processing ‘into’ the finished

article (and thus, as non-taxable to the manufacturer), *when in fact the ‘purpose’ for which it is bought is not for incorporation ‘into’ the manufactured product but rather only to be used in the process of producing the manufactured product for sale. . . where the inclusion of the waste residue of the substance results from unintended (although unavoidable) inefficiency of the manufacturing process, is of no benefit to the product sold, and is of the nature of an impurity rather than of an integral part of the finished product.”* *Id.* at 781. (Emphasis added).

In *Vulcan Foundry, Inc., supra*, the issue was whether coke used by Vulcan Foundry in the process of manufacturing iron manhole covers and rims met the “test [] set out for determining whether an item is subject to sales/use tax is the ‘purpose’ for which it was purchased.” *Id.* at 1198.

Coke is a derivative of coal consisting of nearly 90 percent carbon. To achieve the grade of iron needed for its final product, Vulcan employs a process of melting down scrap iron in a large cylindrical-shaped structure known as a cupola. A five-foot bed of heated coke is placed in the bottom of the cupola. Scrap iron and coke are then added in alternating layers. Cold air and liquid oxygen are injected to increase the temperature to the 2400 to 3000 degrees necessary to melt the scrap iron. The molten iron is drained from the bottom of the cupola, separated from the slag and poured into casting forms.

Vulcan argued that the purpose of using coke is to process carbon into the iron for sale at retail. The grade of iron it needed for the final product must contain between 3.10 and 3.30 percent carbon. Since the scrap iron does not always contain sufficient carbon, and the melting process described above results in a loss of carbon, carbon must be added to

the iron in some way. One method is to use coke as a heat source because it gives off carbon as it burns. The required carbon content is achieved by varying the ratio of coke to scrap iron in the cupola. Expert testimony in the case indicated that the ratio of coke to iron used in the process was one to eight, or approximately 12 ½ pounds of coke is used to make 100 pounds of final iron product. Of the 12 ½ pounds of coke used in the process, there resulted a .46 pound increase of carbon per 100 pounds of iron while 12.04 pounds of the coke went to heat. Stated another way, the expert stated there was approximately ½ pound of carbon from the coke per 100 pounds of final product.

The district court and First Circuit Court of Appeal held that the coke was exempt from the sales tax under the reprocessing exclusion, distinguishing the case from *PPG Industries, Inc., supra*, because in *PPG*, the residue found in the final product was useless waste material and of the nature of an impurity. Here, the presence of carbon in the final product was beneficial to Vulcan.

The Supreme Court reversed, however, holding that the proper inquiry is the purpose for which the coke is bought. It concluded that the evidence showed that the coke is purchased for the purpose of heating the scrap iron; the small amount of carbon in the finished product is incidental. The fact that using coke as a fuel has a beneficial side effect does not change the purpose for which it is bought. Accordingly, it held that Vulcan's purchase of coke is as a "consumer" for a "purpose other than for resale," that is, for its use as a heat source to melt scrap iron and not for further processing into an article of tangible property for sale at retail.

Turning now to the case *sub judice*, we conclude that IP purchases the three chemicals in question as a consumer for a purpose other than for resale. We disagree with the Board's finding that IP's process meets the first requirement that the material itself must be processed into tangible personal property for sale at retail. The materials in this case involve only partial elements of the original materials, namely oxygen atoms, and in such minute amounts that they were not purchased for the purpose of resale in the form of tangible property or further processing into the final product. *PPG Industries, supra*; LAC 61:I.4301.

In *Tarver v. Ormet Corp.*, 91-0361 (La. App. 1 Cir. 4/10/92), 597 So. 2d 1172, *writ denied*, 92-1376 (La. 9/18/92), 604 So. 2d 964, the First Circuit affirmed the district court's holding that caustic soda purchased by Ormet Corporation and used in the manufacturing process of alumina and aluminum hydroxide was not a sale at retail. The court concluded that caustic soda used in the Bayer Process contributed oxygen that becomes a recognizable, beneficial and integral part of Ormet's end products, alumina and aluminum hydroxide. Chemical experiments conducted by Ormet in connection with this litigation proved with certainty that oxygen from the caustic soda forms a recognizable, beneficial and integral part of Ormet's end products. Importantly, the First Circuit distinguished *PPG Industries, Inc., supra*, in that the oxygen in the final product was not an incidental, waste by-product, and distinguished *Vulcan Foundry, Inc., supra*, on grounds that Ormet purchased the material in question, caustic soda, for the purpose of further processing one of its elements, oxygen, into Ormet's end products. The processing of the oxygen from the caustic soda into Ormet's end products is absolutely intended, is necessary and beneficial to the end

products, and is not incidental. Also unlike the situation in *Vulcan*, the caustic soda Ormet purchases and uses in the Bayer Process cannot be replaced by another material. There is no substitute for the caustic soda; the oxygen contributed by the caustic soda was an essential, integral part of the alumina and aluminum hydroxide [and] cannot be added or derived from other materials.

We are not persuaded by the analysis and conclusion of the *Ormet Corp* court. We observe that the court of appeal in *Ormet Corp.*, in order to reach the result, eased the requirement of the test in *PPG Industries* that required that the raw materials become an integral, recognizable part of the finished product. The court added the phrase to include the raw material “*or any of its elements*” as a recognizable, integral part of the finished product.⁴

The instant case is similar to *Ormet* in that, as a result of a process involving chemicals, some oxygen atoms from the chemicals in question are released and bond with some or all of the remaining lignin molecules. This process is not incidental, but intended by IP, because it makes the lignin appear white, increases production, and is beneficial to IP and the final product. We cannot determine from this record, however, just how much oxygen from the original chemicals ends up in the finished product in terms of quantities. Prior to the “short sequence bleaching” process, approximately 86% of the lignin has already been removed by the Kraft Process of “cooking” the pulp mixture. The remaining lignin constitutes

⁴The *Ormet* court stated that “the test for determining whether a material is subject to the Raw Material Exclusion is whether the material was purchased for the purpose of ‘further processing into’ the finished product, such that the material or any of its elements become ‘a recognizable, integral part’ of the finished product.” *Ormet Corp.*, *supra* at 1174.

only 3.5% to 4% of the pulp mixture, of which half to three-quarters of that amount is removed by the “short sequence bleaching” involving the chemicals in question. This process allows IP to keep as much as 1.5% lignin in the pulp mixture, which increases production. But it is important to note that the remaining lignin is not one of the raw materials in question, since it is part of the original wood pulp. All that has occurred is that an additional oxygen atom has been added to each lignin molecule, which causes it to be white. The oxygen present in the remaining lignin from the original three chemicals is therefore far less than 1.5% of the quantity of final product, and the fact remains that there are no intact molecules of the original chemicals sodium chlorate, hydrogen peroxide, and free oxygen found in the finished product.

Although we are not prepared to say that the molecular structure of the original chemicals used in a manufacturing process must remain intact, we conclude that in this case, the presence of oxygen atoms generated by a chemical reaction that end up in the final product, although intended, is simply not enough to escape the conclusion that the chemicals are largely “consumed” in the bleaching process and not passed on into the final paper product.

Regarding the second requirement that the material must become a recognizable, integral part of the end product, we conclude that the Board was not clearly wrong in concluding that the oxygen came from the original chemicals. Although the state’s expert, Dr. Thompson, testified that there has not been a test to determine where the oxygen atoms that bind with the remaining lignin come from and that it would be impossible without some form of tracers to tell, Dr. Genco testified that most of the oxygen atoms

came from the chemicals in this dispute, and that without these chemicals the reactions would not occur to allow this to happen.

However, we concluded that the oxygen from the chemicals is not the same thing as the original chemicals generated, and we are not persuaded that because we know the source of the oxygen molecules, the requirement that the original raw material be recognizable and an integral part of the finished product is met. Clearly the oxygen atoms are an integral part of the lignin as a result of the process; however, the oxygen in the lignin is neither sodium chlorate, hydrogen peroxide nor elemental oxygen, but simply atoms of oxygen now bonded to lignin.

We conclude that the expert testimony also established that the chemicals in question were of benefit to the end product, thereby meeting the third requirement of the reprocessing test. IP's experts testified that by using the newer shorter process involving the chemicals in question, they were able to produce more of the final product by not eliminating all of the lignin, and the addition of oxygen atoms to the remaining lignin in the fibers made the final paper product a brighter and stronger paper. We therefore agree with the Board that the presence of the oxygen from the chemicals made benefitted the product and IP.

The fourth factor is that the "primary purpose" of the purchase of the material must be to process it into the end product. The DOR contends that the primary purpose for IP's purchase of the chemicals in question is "delignification" and the fact that some oxygen atoms from these chemicals bond with the residual lignin is an incidental effect.

According to Dr. Genco, the wood used in the papermaking process starts off consisting of 25% to 26% lignin. The material is sent through a

delignification process, i.e., the Kraft Process, which reduces the amount of lignin in the wood pulp material to 3½% to 4%. In other words , approximately 85% or 86% of the original lignin is removed before the three chemicals are involved. This Kraft process is followed by the “short sequence bleaching” process, which involves the introduction of the three chemicals in question in several stages. The first stage of the bleaching process involves converting sodium chlorate into chlorine dioxide, the latter being a very unstable chemical such that it would be unsafe to store or transport. Chlorine dioxide is made by adding methane and sulfuric acid to the chlorine dioxide. The chlorine dioxide and water that is mixed with the delignified pulp mixture removes 50% to 75% of the remaining lignin, but also causes oxygen molecules to bond with some of the remaining lignin. After a prescribed period designed to retain 1½% to 2% of the lignin in the mixture, the other chemicals, including hydrogen peroxide and elemental oxygen are added. The chemical reactions involving these chemicals also cause oxygen atoms to bond with the remaining lignin.

The DOR contends that the Board did not use the primary purpose test in reaching its findings. After review, we conclude that the Board found that the primary purpose for IP’s purchase of the chemicals in question was to process the oxygen (oxidation or bleaching) from these chemicals *into* the final product. The DOR relies heavily on the fairly recent decision by the First Circuit, *Cosmar Co. v. Slaughter*, 200301310 (La. App. 1 Cir. 4/2/04), 871 So. 2d 646, *writ denied* 2004-15558 (La. 10/1/04), 883 So. 2d 987, for the proposition that “the primary purpose” test is the basis of any determination of whether a transaction is subject to sales and use tax. We conclude that the Board did find that the primary purpose

for IP's purchase of the three chemicals in question was to process oxygen from these chemicals into the final paper product, but this finding is clearly wrong.

The facts in this case are closely comparable to those in *Vulcan Foundry, supra*. The sodium chlorate is used to make chlorine dioxide, whose purpose is to remove the 50%–75% of the remaining lignin from the pulp material. Some oxidation occurs during this stage, much analogous to *Vulcan Foundry*, where some of the carbon molecules bonded with the iron. After this process, the remaining very small percentage of the original lignin is of benefit to IP by increasing the volume of pulp mixture. The retention of the lignin is not a result of the process, but the result of stopping the delignification process at a carefully selected point. Since IP needs to make the paper white, and the remaining lignin makes the paper appear brown, the remaining lignin fibers must be bleached. This is achieved by a further process involving the hydrogen peroxide and the elemental oxygen. When the pulp is from softwood, an additional process involving chlorine dioxide is used. Although there is testimony that the process brings about the added benefit of making the paper stronger, it is far from clear whether the added strength of the paper is actually attributable to the oxygen rather than the lignin fibers which are oxidized. The strength appears to be attributable to the process that allows a small percentage of the lignin fibers already in the pulp mixture to remain.

We conclude that the “purpose” for which IP bought the three chemicals in this case is not for incorporation “into” the pulp mixture product but rather to be used in the process of producing the white paper product for sale. That is to say, to process the pulp mixture by removing

most of the lignin remaining after the Kraft process, and processing what lignin remains thereafter by oxidation. Although the chemical reactions in the process involve adding oxygen atoms whose origin can be traced to the chemicals or processes in question, the purpose of the chemicals is to process the lignin in the pulp for paper, not to incorporate raw materials (the chemicals) into the paper product. Therefore, IP's purchase of the chemicals is as a "consumer" for a "purpose other than for resale" for the purpose of removing and modifying lignin already in the wood, and not for further processing the chemicals themselves into an article of tangible property for sale at retail.

DOR also assigned as error the Board's failure to enforce an alleged agreement between IP and the DOR regarding taxation of purchases of several chemicals used in processing wood pulp, including the three chemicals in question in this case. A copy of what appears to be a fax of a copy of the Compromise and Settlement is in the record on appeal. In the agreement, IP agreed to pay sales and use taxes in the future with respect to the chemicals in question.

Although the agreement covers the chemicals in question without regard to any particular bleaching processes, we agree with IP that the document in the record was not properly authenticated, and therefore constitutes hearsay. DOR did raise the issue of the agreement in its memorandum in support of the petition for judicial review, although the petition itself does not mention the agreement.

Because we conclude that IP is the ultimate consumer of the three chemicals in dispute and therefore is not entitled to a refund of the sales and use taxes paid during the tax period in question, we need not determine the

viability of the settlement agreement regarding payment of taxes.

Conclusion

Based upon the foregoing analysis, we conclude that the Board erred in finding that IP's purchases of sodium chlorate, hydrogen peroxide and elemental oxygen were exempt from sales and use taxes. We further conclude that the district court erred in affirming the judgment of the Board. Accordingly, we reverse the judgment of the Board and render judgment in favor of the Louisiana Department of Revenue. All costs of this appeal are assessed against IP.

REVERSED AND RENDERED.