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PRIVATE TAXPAYER RULING LR08-008

October 14, 2008

The Department issues this private taxpayer ruling in response to your letter of January 24, 2008 requesting a ruling on behalf of your client . . . ("Client") . . . on the applicability of Arizona use tax to Client's purchases of gases for use in its facility. At the Department's request, you provided supplemental information in a February 29, 2008 letter.

Statement of Facts:

The following facts are excerpted from your January 24 request:

. . . [Client] invents and manufactures innovative nano-enhanced products. The primary products manufactured include catalysts for the automotive, fine chemical, and refinery industries, and high-strength supercomposites for military, aerospace and other structural materials applications.

[Client] purchases large amounts of nitrogen and argon gas for use in its manufacturing facility These gases are used to transport the product (nanopowder) in a heated powder form through a tubular structure approximately 30 feet long called a "train." The gas and powder are contained in, and move through, an inner tube that is surrounded by an outer tube filled with water. As the gas and powder move through the inner tube, [they are] cooled by the water in the outer tube. The gas within the inner tube prevents the powder from having a chemical reaction that would otherwise occur during this cooling process and the gas is the only transport mechanism to move the powder through the cooling train. The gas is in direct contact with the powder while inside the inner tube. After the cooling process is complete, the gas is released into the atmosphere. The powder is captured in a collection device. The gases used in this process are essential to the completion of the finished product.

Your February 28 letter provides the following additional details and simplified illustration of the described cooling process:

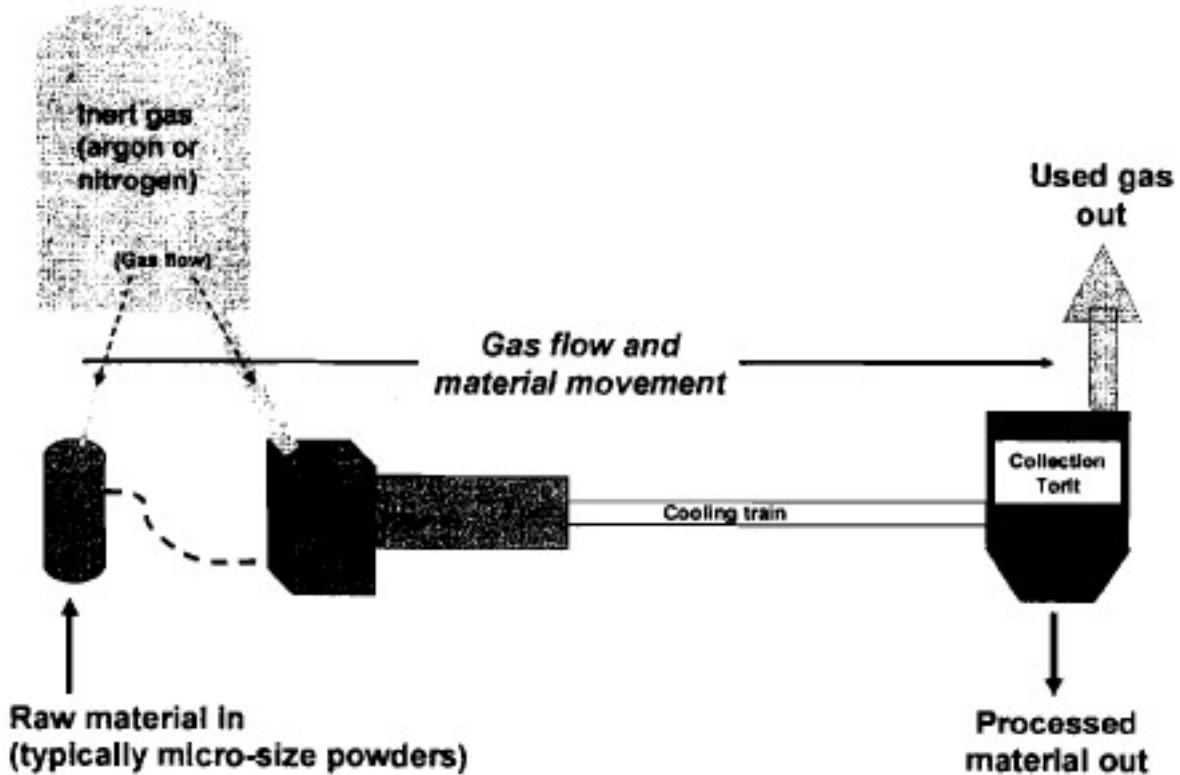
As stated in the initial letter . . . , the gas moves the powder through the tool. In addition however, it also helps provide essential cooling and provides the inert (absent of oxygen) atmosphere under which the raw material(s) are separated, in some cases combined with other similarly separated materials, then kept at this nano size during the cooling process. In addition . . . , the use of either argon or nitrogen maintains the chemical purity required for these powders. Only compounds with

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oxygen could be produced without the use of an inert gas. To date this [would] probably [constitute] less than 1% of the different materials created.



Your Issues:

Do nitrogen and argon gases purchased by Client and used in the above-described cooling process fall within the Arizona Revised Statutes ("A.R.S.") § 42-5159(B)(1) ("machinery-or-equipment") use tax exemption?

Your Position:

Client uses the gases in a qualifying manufacturing operation. Based on the Arizona Supreme Court's 2004 holding in *Arizona Department of Revenue v. Capitol Castings, Inc.*¹ (hereinafter "Capitol Castings III"), the gases are used directly in and are an integral part of Client's manufacturing operation. The gases "[function] the way machinery or equipment might in an integrated, synchronized system within the industry" and "[have] a close nexus to the process as [they are] used as a transport mechanism to move the nano-powder through the cooling train." They are "in direct contact with the nano-powder while inside the inner tube of the train" and "are essential to the completion of the finished product." Taken in the entirety, purchases of nitrogen and argon gases are exempt from Arizona use tax under the A.R.S. § 42-5159(B)(1) machinery-or-equipment exemption.

¹ 207 Ariz. 445, 88 P.3d 159.

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Conclusions and Ruling:

Tax exemptions are strictly construed "because they violate the policy that all taxpayers should share the common burden of taxation," but must "not be so strictly construed as to defeat or destroy the [legislative] intent and purpose."² The Court of Appeals explained in *Duval Sierrita Corp. v. Arizona Department of Revenue*,³ a seminal case from 1977 involving the machinery-or-equipment exemption, that the term "used directly" was intended by the Arizona Legislature "to create a classification of personal property entitled to exemption from taxation . . . depending on its ultimate function" in a taxpayer's operation. In other words, the analysis should center on how a particular item "functions in the industrial process at issue to see whether the item qualifies for the exemption," and should apply the exemption only to those items that are "essential to [the] operation and which makes it an integrated system."⁴ In *Capitol Castings III*, the Arizona Supreme Court explained that "there is no dispute" that the Legislature enacted the exemption "to stimulate business investment in Arizona in order to improve the state's economy and increase revenue from other taxes, such as income and property taxes."⁵

The *Capitol Castings III* court summarized the proper A.R.S. § 42-5159(B)(1) analysis with the following admonitions:

1. Apply "flexible and commonly used definitions of machinery and equipment within the relevant industry" in such a manner as to further the legislative intent to take a "broader, more flexible approach" in determining what constitutes machinery or equipment.⁶
2. Examine "the nature of the item and its role in the operations," considering "whether the item physically touches the raw materials or work in process, whether the item manipulates or affects the raw materials or work in process, or whether the item adds value to the raw materials or work in process as opposed to simply reducing costs or relating to post-production activities." If the item is "essential or necessary to the completion of the finished product" or plays a prominent role in "maintaining a harmonious 'integrated synchronized system'" with clearly exempt machinery and equipment, it will be more likely to fall within the exemption's scope.⁷

In the facts provided by Client, it is clear that Client is engaged in manufacturing nanopowder and products incorporating nanopowder. It is also clear that the movement of nanopowder through the described cooling process using the argon and nitrogen gases occurs at a stage within, rather than far-removed from, the manufacturing and processing

² *Tucson Botanical Gardens, Inc. v. Pima County*, 2008 AZ App (1st) TX07-0007 ¶ 8, 2008 WL 2109843, at *2 (May 20, 2008) (citing *Capitol Castings III*, 207 Ariz. 445, 447, 88 P.3d 159, 161).

³ 116 Ariz. 200, 204-05, 568 P.2d 1098, 1102-03.

⁴ *Capitol Castings III*, 207 Ariz. at 448, 88 P.3d at 162 (citing *Duval Sierrita*, 116 Ariz. at 204-05, 568 P.2d at 1102-03).

⁵ 207 Ariz. at 448, 88 P.3d at 162.

⁶ 207 Ariz. at 450-51, 88 P.3d at 164-65.

⁷ 207 Ariz. at 450-51, 88 P.3d at 164-65.

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activities occurring at Client's facility, such that it is unnecessary to engage in a detailed analysis of whether the gases are used during manufacturing or processing activities. Moreover, Arizona courts—in both *Duval Sierrita* and *Capitol Castings III*—have clarified that items not ordinarily considered to be "machinery" or "equipment" may nevertheless qualify for the machinery-or-equipment exemption "if they function as a necessary part of an integrated process."⁸

The argon and nitrogen gases physically move nanopowder through a cooling tube as part of Client's operation of manufacturing nanopowder and products that incorporate nanopowder at some point downstream from the particular cooling process using the gases at issue. The facts assert that the cooling process is necessary to the operation and that the gas flow is the only means to transport nanopowder through the cooling train and prevents the powder from undergoing an undesired chemical reaction. The gases appear to play a necessary role of a process to create a finished product (*i.e.*, the cooled nanopowder or chemical products incorporating nanopowder) and also serve to maintain an integrated system of transporting the nanopowder through Client's processing activities. Given that the particular gases at issue not only transport the nanopowder—as any propelled gas might carry matter of similar size—but also, as inert gases, are able to maintain the chemical purity of the powder, the argon and nitrogen gases appear integral to Client's process to an even greater degree.

Based on the facts provided, the Department rules that Client's purchases of argon and nitrogen gases for use in the described cooling process constitute purchases of machinery or equipment used directly in a manufacturing or processing operation, and are therefore exempt from Arizona use tax pursuant to A.R.S. § 42-5159(B)(1).

This private taxpayer ruling does not extend beyond the facts presented in your letters of January 24 and February 29, 2008.

This response is a private taxpayer ruling and the determination herein is based solely on the facts provided in your request. The determinations are subject to change should the facts prove to be different on audit. If it is determined that undisclosed facts were substantial or material to the Department's making of an accurate determination, this taxpayer ruling shall be null and void. Further, the determination is subject to future change depending on changes in statutes, administrative rules, case law, or notification of a different Department position.

The determinations in this private taxpayer ruling are only applicable to the taxpayer requesting the ruling and may not be relied upon, cited, or introduced into evidence in any proceeding by a taxpayer other than the taxpayer who has received the private taxpayer ruling.

⁸ See, *e.g.*, *Capitol Castings III*, 207 Ariz. 445, 450, 88 P.3d 159, 164 (citing with approval the Tax Court's holding in *Arizona Department of Revenue v. Cyprus Sierrita Corp.*, 177 Ariz. 301, 304, 867 P.2d 871, 874 (1994), that three chemicals functioned as machinery or equipment in processes of extracting copper from ore and, consequently, should be treated as such for exemption purposes).