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## PRIVATE TAXPAYER RULING LR13-011

July 30, 2013

The Department issues this private taxpayer ruling in response to your letters ("Request") requesting a ruling on behalf of . . . ("Company"). Specifically, you request a ruling regarding whether specific identified machinery or equipment that Company will use in its reactivated carbon business are exempt from Arizona use tax pursuant to Arizona Revised Statutes ("A.R.S.") § 42-5159(B)(1) ("machinery or equipment") or A.R.S. § 42-5159(B)(18). Pursuant to A.R.S. § 42-2101, the Department may issue private taxpayer rulings to taxpayers and potential taxpayers on request.

### ISSUES:

1. Whether the below-identified items, other than the chemical scrubber, purchased by Company and used in the reactivated carbon process fall within the A.R.S. § 42-5159(B)(1) use tax exemption?
2. Whether the chemical scrubber purchased by Company and used in the reactivated carbon process falls within the A.R.S. § 42-5159(B)(18) use tax exemption?

### RULING:

Based on the facts and documentation provided, the Department rules as follows:

1. The following items purchased by Company and used in the reactivated carbon process are exempt under A.R.S. § 42-5159(B)(1): bulk bag unloader; feed elevator; feed conveyor; feeding screw; reactivation furnace; cooling screw; discharge conveyor; screening equipment; discharge elevator; and bagging system.

The following items purchased by Company and used in the reactivated carbon process are not exempt under A.R.S. § 42-5159(B)(1): pre-production front end loader; post-production front end loader; and the warehouse equipment.

2. The chemical scrubber used in the reactivated carbon process falls within the A.R.S. § 42-5159(B)(18) use tax exemption.

### FACTS ASSERTED BY COMPANY:

The following are facts excerpted from the March 22, 2012 letter:

**PRIVATE TAXPAYER RULING LR13-011**

July 30, 2013

Page 2

Activated carbon is a porous material that removes organic compounds from liquids and gases by a process known as “adsorption.” In adsorption, organic molecules contained in a liquid or gas are attracted and bound to the surface of the pores of the activated carbon as the liquid or gas is passed through. The primary material in the production of Company’s activated carbon is crushed, sized and processed in low temperature bakers followed by high-temperature furnaces. This heating process is known as “activation,” and develops the pore structure of the carbon.

The product manufactured through this process is known as “virgin carbon.” After initial manufacture, further processing, such as grinding, alters virgin carbon to customer specifications. After activated carbon’s adsorptive capacity has been exhausted, the carbon is useless. However, the spent carbon can be returned to Company for thermal reactivation. In the reactivation process, spent activated carbon is heated in furnaces devoid of oxygen using steam as a selective oxidant. The adsorbed organics are either volatilized from the activated carbon or pyrolysed to a carbon char. The volatilized organics are destroyed in the furnace’s afterburner and acid gases are removed by means of a chemical scrubber. The high-temperature reaction with steam serves to restore the adsorptive capacity of the activated carbon. This product is known as “reactivated carbon.” The final product manufactured at the plant will be bagged reactivated carbon.

Equipment used in [the] manufacturing process:

1. Pre-production front end loader;
2. Bulk bag unloader;
3. Feed elevator;
4. Feed conveyor;
5. Feeding screw;
6. Reactivation furnace;
7. Chemical scrubber;
8. Cooling screw;
9. Discharge conveyor;
10. Screening equipment;
11. Discharge elevator;
12. Bagging system;
13. Post-production front end loader; and
14. Warehouse equipment.

The following fact is excerpted from your June 18, 2012 letter:

**PRIVATE TAXPAYER RULING LR13-011**

July 30, 2013

Page 3

VI. The chemical scrubber is machinery that will be used in the manufacturing operation that will be used to meet air pollution control rules established by the ADEQ. The ADEQ will issue pollution control permits for the chemical scrubber in accordance with Arizona statute.

The following facts are excerpted from the "Air Quality Permit" issued by the Maricopa County Air Quality Department ("MCAQD") to Company on October 14, 2012 for the planned Arizona facility at issue.

This Permit is issued in accordance with Maricopa County Air Quality Department Regulations, Rule 200, §303, and Arizona Revised Statutes, §49-404c and §49-480. If the MCAQD Control Officer determines that additional monitoring, sampling, modeling and/or control of emissions from the facility may reasonably be needed to provide for the continued protection of public health, safety and/or welfare, the MCAQD Control Officer will amend the provisions of this permit.

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The Permittee shall not operate kilns unless they are vented without bypass to properly functioning duct burner, scrubber and baghouse at all times.

**LEGAL ANALYSIS:**

**I.**

**A.R.S. § 42-5159(B)(1)**

A.R.S. § 42-5155 imposes the use tax on purchases of tangible personal property from out-of-state retailers. A.R.S. § 42-5155(E) states that "[e]very person storing, using or consuming in this state tangible personal property purchased from a retailer or utility business is liable for the tax." Arizona law exempts from use tax any "[m]achinery, or equipment, used directly in manufacturing, processing, fabricating, ... or metallurgical operations."<sup>1</sup> The statute requires that the "terms 'manufacturing,' 'processing,' 'fabricating,' 'job printing,' 'refining' and 'metallurgical'" be interpreted to include "those operations commonly understood within their ordinary meaning." For A.R.S. § 42-5159(B)(1) to apply, the items purchased must be (1) machinery or equipment and (2) used directly in manufacturing, processing, fabricating, job printing, refining or metallurgical operations.

***Machinery or Equipment***

The Arizona Supreme Court in *State ex rel. Ariz. Dep't of Revenue v. Capitol Castings, Inc.*, 207 Ariz. 445, 88 P.3d 159 (2004) (hereinafter "*Capitol Castings III*"), provides the following definitions of machinery and equipment:

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<sup>1</sup> A.R.S. § 42-5159(B)(1).

## PRIVATE TAXPAYER RULING LR13-011

July 30, 2013

Page 4

Generally accepted definitions of “machinery” indicate that it may be “an assemblage of machines,” “the parts of a machine collectively,” or “a system by which action is maintained or by which some result is obtained.” Webster's College Dictionary 788 (2d ed.1997). The definition includes “an apparatus consisting of interrelated parts with separate functions, used in the performance of some kind of work,” or “a device that transmits or modifies force or motion.” *Id.* at 787. “Equipment” includes “the articles, implements, etc., used or needed for a specific purpose or activity.”

*Capitol Castings III* adds that when considering what constitutes machinery or equipment while interpreting A.R.S. § 42-5159(B)(1), one must first “apply a flexible and commonly used definition of machinery or 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.<sup>2</sup> The court states the concept of “fixed assets” should not be relied upon when contemplating whether an item is machinery or equipment because such an analogy is “too narrow and therefore unhelpful in determining what constitutes machinery or equipment.”<sup>3</sup> Moreover, *Capitol Castings III* clarifies that whether an item qualifies as “machinery or equipment” must be considered in light of the second element of the exemption, that it be “used directly” in a manufacturing or other qualifying process.<sup>4</sup> The Court acknowledges that certain items not traditionally considered to be “machinery” or “equipment” may qualify as such depending on their function in the process.<sup>5</sup>

### ***Processing Operation***

#### “Processing” as used in A.R.S. § 42-5159(B)(1)

The machinery or equipment must be used directly in “manufacturing,” “processing,” “fabricating,” or “metallurgical” operations to qualify under A.R.S. § 42-5159(B)(1).<sup>6</sup> The term “processing” is not specifically defined in statute by the Arizona Legislature. As outlined in *United Dairymen of Ariz. v. Rawlings*, 217 Ariz. 592, 596, 177 P.3d 334, 338 (Ct. App. 2008) for undefined terms, as a general rule of construction, courts will consult an established and widely used dictionary to determine their common and ordinary meaning. The term “process” is defined as follows:

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<sup>2</sup> *Capitol Castings III*, 207 Ariz. at 451, 88 P.3d at 164-65.

<sup>3</sup> 207 Ariz. at 448, 88 P.3d at 165.

<sup>4</sup> 207 Ariz. at 448, 88 P.3d at 164.

<sup>5</sup> 207 Ariz. at 450, 88 P.3d at 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).

<sup>6</sup> *Id.*

## PRIVATE TAXPAYER RULING LR13-011

July 30, 2013

Page 5

**3. trans. a.** To subject to or treat by a special process; to operate on mechanically or chemically; spec. to preserve or alter (food, a foodstuff, etc.) in this way. Also, more loosely: to deal with (something), esp. according to an established procedure.<sup>7</sup>

Whether a business constitutes a processing operation is further tempered by the Arizona Court of Appeals' 2002 holding in *Arizona Department of Revenue v. Blue Line Distributing, Inc.*, 202 Ariz. 266, 268, 43 P.3d 214, 216 (Ct. App. 2002) that a business must be "commonly understood" to be a manufacturing or processing operation, not merely one "in the abstract, or in isolation."

### A.A.C. R15-5-120

A.A.C. R15-5-120 interprets A.R.S. § 42-5159(B)(1) and establishes the scope of the "manufacturing" or "processing" operations at issue in A.R.S. § 42-5159(B)(1). A.A.C. R15-5-120 provides:

Machinery or equipment used in manufacturing or processing includes machinery or equipment that constitutes the entire primary manufacturing or processing operation from the initial stage where the actual processing begins through the completion of the finished end product, processing, finishing, or packaging of articles of commerce.

Therefore, a piece of machinery or equipment is exempt under A.R.S. § 42-5159(B)(1) if it fits within the boundaries of the manufacturing or processing operation as defined in A.A.C. R15-5-120. All machinery or equipment which is found to be outside of the boundaries of the operation is not eligible for the A.R.S. § 42-5159(B)(1) exemption.

### ***Used Directly***

In interpreting the A.R.S. § 42-5159(B)(1) exemption, in 2004, the Arizona Supreme Court in *Capitol Castings III* reaffirmed the use of the "ultimate function" test and the "integrated approach" to determine if items are machinery or equipment "used directly" in a qualifying operation.<sup>8</sup> Under the ultimate function test, a court "should examine how [an] item

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<sup>7</sup> "Process, v.1" Oxford English Dictionary Online [hereinafter OED Online] (Mar. 2008 rev.), at <http://dictionary.oed.com>. See also "process, n.," sense 8(b), OED Online (Mar. 2009 rev.) ("A continuous and regular action or succession of actions occurring or performed in a definite manner, and having a particular result or outcome; a sustained operation or series of operations. (Now the most common use.) . . . [w]ith reference to artificial or deliberate action (in later use esp. in manufacturing or other industry).")

<sup>8</sup> 207 Ariz. at 450, 88 P.3d at 164 (affirming use of the ultimate function test from *Duval Sierrita Corp. v. Arizona Department of Revenue*, 116 Ariz. 200, 568 P.2d 1098 (Ct. App. 1977)).

**PRIVATE TAXPAYER RULING LR13-011**

July 30, 2013

Page 6

functions in the industrial process at issue to see whether the item qualifies" for the exemption.<sup>9</sup> If an item is already placed in service, the item's role in "maintaining a harmonious 'integrated synchronized system'" must be inspected.<sup>10</sup> The Arizona Supreme Court states:

The closer the nexus between the item at issue and the process of converting raw materials into finished products, the more likely the item will be exempt. As part of its analysis, the court should consider whether an 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.<sup>11</sup>

Under this test, items that might not ordinary or traditionally be considered machinery or equipment could nevertheless qualify "if they function as a necessary part of an integrated process."<sup>12</sup> The court in *Capitol Castings III* noted, for example, that an earlier case found that several chemicals constituted machinery or equipment because, although they "did not fall within the commonly held notions of machinery or equipment," they still "functioned as such in the processes of extracting copper from ore."<sup>13</sup>

The Department determines that the bulk bag unloader; feed elevator; feed conveyor; feeding screw; reactivation furnace; cooling screw; discharge conveyor; screening equipment; discharge elevator; and bagging system used in the reactivated carbon process fall within the A.R.S. § 42-5159(B)(1) use tax exemption. Company's business of creating reactivated carbon is a qualifying process because it is commonly understood to be a processing operation. The aforementioned items constitute machinery or equipment "used directly" in processing because each item plays a role in "maintaining a harmonious 'integrated synchronized system'" by being either essential or necessary to the completion of the finished product, physically touching the raw materials or work in process, manipulating or affecting the raw materials or work in process, or adding value to the raw materials.

**II.**

**A.R.S. § 42-5159(B)(18)**

In order for a sale of machinery or equipment to be exempt pursuant to A.R.S. § 42-5159(B)(18), the following four elements must be satisfied: (1) machinery or equipment, including related structural components; (2) employed in connection with

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<sup>9</sup> *Capitol Castings III*, 207 Ariz. at 450, 88 P.3d at 164.

<sup>10</sup> *Id.*

<sup>11</sup> *Id.*

<sup>12</sup> *Id.*

<sup>13</sup> *Id.*

## PRIVATE TAXPAYER RULING LR13-011

July 30, 2013

Page 7

manufacturing, processing, fabricating, producing or transmitting electricity, or research and development; (3) used directly; and (4) to meet or exceed rules or regulations adopted by the Federal Energy Regulatory Commission, the United States Environmental Protection Agency, the United States Nuclear Regulatory Commission, the Arizona Department of Environmental Quality or a political subdivision of this state to prevent, monitor, control or reduce land, water or air pollution.

The *Arizona State Senate Final Revised Fact Sheet for S.B. 1253*, Forty-third Legislature – 2nd Reg. Sess., at 2-3 (Az. 1998) provides guidance on the Arizona Legislature’s intent when it adopted A.R.S. § 42-5061(B)(18) in 1998. The intent of A.R.S. § 42-5061(B)(18) was to apply the historical interpretation of A.R.S. § 42-5061(B)(1) and the holding in *Duval Sierrita Corp.* to environmental protection equipment in an effort to promote the use of pollution control devices.<sup>14</sup> A.R.S. § 42-5061(B)(18) is intended to cover “environmental protection equipment that is essential to the operations of the business and part of an integrated system.”<sup>15</sup>

The Department determines that the chemical scrubber used in the reactivated carbon process falls within the A.R.S. § 42-5159(B)(18) use tax exemption. Company’s business of creating reactivated carbon is a qualifying process because it is commonly understood to be a processing operation. Company’s chemical scrubber is machinery or equipment “used directly” in processing because it is “environmental protection equipment that is essential to the operations of the business and part of an integrated system” as the chemical scrubber destroys volatile organic compounds and acid gases that the reactivation furnace separates from the reactivated carbon. The scrubbers are necessary to meet or exceed pertinent rules because Company is required to operate the chemical scrubber at all times to satisfy the enforceable emissions limitations and they serve the purpose of pollution control.

**This response is a private taxpayer ruling and the determinations herein are based solely on the facts provided in the Request. Therefore, the conclusions in this private taxpayer ruling do not extend beyond the facts presented in your correspondence dated March 22, 2012, June 6, 2012 and June 18, 2012. 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 private 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 nor introduced into evidence**

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<sup>14</sup> *Id.*

<sup>15</sup> *Id.*

**PRIVATE TAXPAYER RULING LR13-011**

July 30, 2013

Page 8

**in any proceeding by a taxpayer other than the taxpayer who has received the private taxpayer ruling. In addition, this private taxpayer ruling only applies to transactions that occur or tax liabilities that accrue from and after the date the taxpayer receives the ruling.**

Lrulings/13-011-D