



SC PRIVATE LETTER RULING #90-3

TO: XYZ

SUBJECT: Gamma Irradiator
(Sales and Use Tax)

REFERENCE: S.C. Code Ann. Section 12-35-550(17) (1976)

AUTHORITY: S.C. Code Ann. Section 12-3-170 (1976)
SC Revenue Procedure #87-3

SCOPE: A Private Letter Ruling is a temporary document issued to a taxpayer, upon request, and it applies only to the specific facts or circumstances related in the request. Private Letter Rulings have no precedential value and are not intended for general distribution.

Question:

Are purchases by a contractor of concrete, reinforced steel bars and a metallic pool liner, when used to construct a gamma irradiator for XYZ, exempt from the sales and use tax, pursuant to Code Section 12-35-550(17)?

Facts:

XYZ is engaged in the manufacture and sale of optical products, including contact lens solutions. XYZ's main solutions manufacturing plant is located in South Carolina. The manufacture and sale of solutions is subject to Food & Drug Administration (FDA) regulations, which require that the product be free of organisms which would be harmful to the user. The bottle, in which the solution is packaged, as well as the solution itself, must meet certain sterilization standards. Products which do not meet these criteria may not be sold in the marketplace. XYZ has chosen to employ a gamma irradiation process to meet the sterilization requirements for bottles.

Gamma rays are high frequency electromagnetic waves which kill living organisms. Because the rays are harmful to humans as well as undesired organisms, steps must be taken to protect humans from lethal dosages of radiation. The usual method of protection employs a biological shield composed of lead or concrete. Low level dosages are generally shielded with lead, while concrete is employed in larger applications requiring higher intensities.

The facility, which is being built for XYZ by ABC Construction Company, consists of 3 main parts:

1. Radiation Source
2. Storage Pool
3. Biological Shield

Exhibit A shows a typical irradiator of the type being built for XYZ. The source rack contains pencils of cobalt 60. The cobalt emits a continuous stream of gamma radiation. The storage pool of deionized water provides shielding of the source when the process is not in operation. The pool allows the operator to enter the irradiation room for inspection, adjustment and start up purposes.

The irradiation process is initiated by turning a key switch in the extreme rear of the irradiation area. The operator then makes his way out of the winding inner tunnel to the control console, checking to insure that no one is inside the area. Turning a second key switch within 90 seconds causes the source rack to be raised from the pool and the irradiation process begins. Bottles pass by the source rack and are exposed to as much as 2.5 million rads of gamma radiation. After passing by the source, the bottle sterilization phase of the manufacturing process will be complete, and the bottles will meet FDA requirements.

Five hundred rads is a lethal dose to humans. To protect the operator and others from a dose that can be up to 5,000 times the lethal level, a concrete shield has been erected to enclose the irradiation area. The cumulative thickness of various concrete barriers is nearly 6 feet in any direction from the source. This extraordinary thickness provides the needed shielding. The gamma irradiator, as a whole, is licensed by the South Carolina Department of Radiological Health. This license specifies the shielding requirements which the concrete shield must meet. Without this shield, the facility could not lawfully operate.

Entry and exit openings are required to supply bottles and utilities to the irradiator. Taking advantage of the essentially straight lines in which gamma rays travel, these entries and exits follow a maze like path. Since the rays cannot navigate corners, each right angle diminishes the rays by 95%. Multiple angles bring the levels even lower. In combination, the concrete and right angles bring the level of radiation outside the vault to acceptable levels.

Code Section 12-35-550(17) exempts from the sales and use tax:

The gross proceeds of the sale ofmachines used in mining, quarrying, compounding, processing and manufacturing of tangible personal property;...

Discussion:

The issue is whether the contractor has constructed a machine (personal property) or a building (real property).

In resolving this issue, we may look to the South Carolina courts. In Hercules Contractors and Engineers, Inc. v. South Carolina Tax Commission, 280 S.C. 426, 313 S.E. 2d 300, (1984 App.) (writ of certiorari was denied on May 17, 1984), the court reviewed the tax exempt status of a waste water facility at a textile plant in South Carolina. The facility was "situated in an uncovered area on plant property and [consisted] of various vats, basins, tanks, pumps and other mechanical devices, as well as troughs and pipes which carry the waste from one part of the facility to another".

The court concluded, with respect to the waste water treatment facility, that "this facility operates as one single entity, and that entity is a 'machine'." The court cited Commonwealth v. Philadelphia Electric, 472 PA. 530, 372 A.2d 815 (1977), (a Pennsylvania Supreme Court decision which concerned the "problem of the connection of a manufacturing machine with the land upon which it sits") which held:

Under our case law, the large, fixed, and immovable nature of the property in question is not dispositive. We have long rejected tests such as "physical attachment" or "applies force or involves the quality of motion" as doctrines not adapted "to the business and improvements of the age." ...Thus, this Court has held that such fixed and immovable items as ore yards, blast furnace stock bins, and slag pits...and oil refinery tanks...are machinery and equipment and not taxable as realty. (Citations omitted.)

The test for determining what is machinery and equipment, first formulated in [In re Borough of Aloquippa] Jones & Laughlin, 405 Pa. [421] at 431, 175 A.2d [856] at 861, provides:

"[I]mprovements, whether fast or loose, which (1) are used directly in manufacturing the products that the establishment is intended to produce; (2) are necessary and integral parts of the manufacturing process; and (3) are used solely for effectuating that purpose are excluded from real estate assessment and taxation. On the other hand...improvements which benefit the land generally and may serve various users of the land are subject to taxation."

Our court, therefore, concluded that "a particular 'structure' may or may not constitute a machine for tax purposes, depending not upon its form but upon its use." The court in Hercules Contractors and Engineers, Inc. v. South Carolina Tax Commission, supra, further cited Gulf Oil Corporation v. City of Philadelphia 357 Pa. 101, 53 A.2d 250 (1947) "to show that no logical distinction exists between the moving parts of a machine and those which are static". The court, in Gulf Oil, using the example of a butter churn, held:

If for purposes of taxation static machinery must be separated from machinery that moves, it would be necessary, for example, in assessing butter manufactories to separate the blades which beat the cream, from the barrel which contains it.

Our court also held that the above rationale would not apply to buildings in that "[t]he concrete vats and basins..., unlike buildings, have utterly no use apart from the barrel which contains it".

In reviewing the Commission Regulations, the court held that Regulation 117-174.123 "clearly provides Hercules was entitled to purchase the materials used to construct the facility free of sales or use tax". That regulation reads:

Manufacturers or compounders are entitled to purchase at wholesale free of the sales or use tax, materials used by them in the building of machines for the purpose of manufacturing or compounding tangible personal property for sale.

It should be noted that only those materials are exempt to manufacturers or compounders which are used by them in building machines for the purpose of manufacturing or compounding tangible personal property for sale. This ruling would not be for application in the case of the use of property in the nature of building materials from which there is erected a "structure", which upon completion might be used for producing tangible personal property for sale.

It is well to note that the court further held Regulation 117-174.45, entitled "Building Materials", applies to "materials used to improve real property" and was, therefore, not applicable to materials used to construct a machine.

In reviewing the purpose and use of the gamma irradiator, several factors must be noted.

1. The vault is designed and licensed for the purpose of containing gamma radiation during the sterilization process. The sterilization process is an essential activity in the manufacturing of contact lense solution. Concrete is used because of its shielding qualities on large scale irradiators. Smaller, less powerful irradiators have shields consisting of steel and lead. The overall shape and size of these smaller irradiator approximate a home refrigerator.
2. The license granted by the South Carolina Department of Radiological Health grants to the holder the right to operate a unit containing a specific radiation source with a specific radiation shield.
3. The vault is nearly 6 feet thick. The extraordinary thickness is solely to contain gamma radiation. It is unlikely that an ordinary structure or building would require walls this thick.
4. The specialized design incorporates a maze arrangement to trap gamma radiation.
5. For safety reasons the vault is designed to withstand a direct airplane hit and catastraphic earthquake. These dual features are not usually designed into the ordinary building or structure.
6. The facility's walls are independent of the building which houses the facility.

Conclusion:

The gamma irradiator, in question, constitutes a machine; therefore, purchases by the contractor of concrete, reinforced steel bars and the metallic pool liner, used in constructing the gamma irradiator for XYZ, are exempt from the sales and use tax, pursuant to Code Section 12-35-550(17).

SOUTH CAROLINA TAX COMMISSION

s/S. Hunter Howard Jr.

S. Hunter Howard, Jr., Chairman

s/A. Crawford Clarkson Jr.

A. Crawford Clarkson, Jr., Commissioner

Columbia, South Carolina
February 21 _____, 1990