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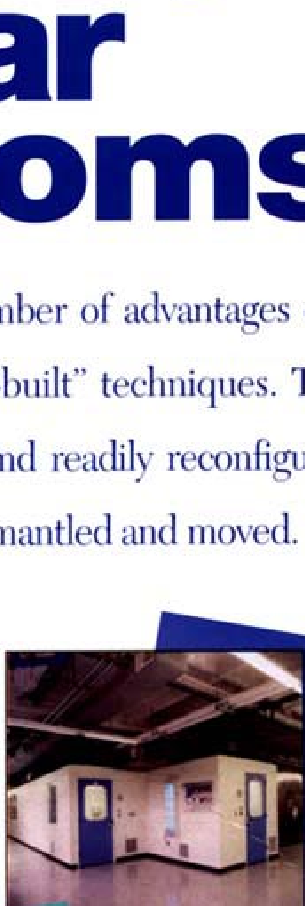
The value of a cleanroom is in its use, not ownership.

The Surprising Advantages of Modular Cleanrooms

Modular cleanrooms offer a number of advantages over those constructed using "stick-built" techniques. They can obviously be built quickly and readily reconfigured, upgraded, expanded, even dismantled and moved.

But two other attributes—not necessarily known to those who labor in them—may make modular cleanrooms (**Photos 1 and 2**) a prudent choice:

- **Tax Status.** Modular cleanrooms are normally considered eligible for accelerated depreciation (vs. real property).
- **True Operating Lease Financing.** Lease financing is usually available not only for modular cleanrooms, but also for associated process equipment and process support services within.



"Relocatability"

While the speed of modular construction and the flexibility it offers for future expansion and rearrangement, rather than "relocatability," appear to be the primary selection criteria for modular construction (and the feature most valued by owners), a number of modular cleanrooms have, in fact, been successfully relocated over the years. Modular component systems—i.e., moveable walls, ceiling panels, HEPA filters, lights, ductwork, and independent HVAC and controls—may be dismantled, moved, and reinstalled (**Photos 3 and 4**). Flooring may or may not be salvageable; raised perforated tiles on pedestals are clearly relocatable, but welded vinyl and epoxy/epoxy terrazzo are not. Obviously, caulking and pressure seals must be replaced.

Photos 1 and 2. *Collagenesis (Beverly, MA), an innovative biomaterials company that develops, processes, and markets advanced tissue-based products, chose the modular approach for its biosafety facility for the production of Dermalogen™, an injectable Human Tissue Matrix™ implant for the treatment of facial contour defects.*

Excerpts from Recent State Tax Assessments

MARYLAND:

Taxability of Persons and Transactions, Multi-States Sales Tax Guide, Sec. 11-100MD: Production Activities (Authority: MD TGA Sec. 11-101 d, e, j, k; MD Regs. 03.06.01.24, 03.06.01.30):

To encourage manufacturing in the state and to minimize the multiplication of the tax at various levels in the distribution chain, Maryland generally exempts from the sales and use tax purchases of items used in manufacturing and production activities:

Beginning January 1, 1995, the term 'production activity' includes producing or repairing production machinery or equipment, and establishing or maintaining cleanrooms or clean zones for use in the manufacture of drugs, medical devices, and biologics.

Regs Code 03.06.01.32 (B) (1); Maryland Sales Use Tax Bulletin 97-2 (para. 92, 034):

Effective 7/1/00 cleanrooms required for quality control and employee safety will also be exempt. (MD. Code Ann. Tax-Gen Section 11-101 (d) (1); MD.

OHIO:

Department of Taxation, Tax Code Sec. 5703-9-21, Example 7:

A paper manufacturer makes special paper for use in full color photocopying. The process to apply the paper coating must be done in a dust- and pollution-free environment. Rolls of paper are passed through a machine where the coating is applied and dried. This process occurs in a cleanroom, which is separated from the rest of the plant by airtight partitions and the ceiling is coated with an easily cleaned plastic. Three of the walls and the ceiling are free standing and not part of the walls and ceiling of the building itself; the fourth wall, however, is a section of a wall of the larger structure. Employees can only enter the cleanroom through two airlocks, which prevent dirty air from entering. All air is filtered and regulated as to temperature and humidity by heat pumps, electric heaters, dehumidifiers, and exhaust fans that serve only the cleanroom and maintain a positive air pressure in the room. This equipment is automatically controlled by a small computer using data from air monitoring sensors in the room. Employees must wear disposable paper coveralls, overshoes, and caps. The room has an intercom to minimize traffic in and out of the room. Lighting in the room is by normal fluorescent fixtures attached to the ceiling.

The paper coater is production machinery and is not taxable. The cleanroom, including the heaters, heat pumps, light fixtures, etc., remains tangible personal property, since its special use primarily serves the business rather than the real estate.

Since the cleanroom provides environmental regulation in a special and limited area, and such regulation is essential for the manufacturing to occur, it is not taxable. This includes the partitions and ceiling, airlocks, heat pumps, heaters, dehumidifiers, exhaust fans, ductwork, air monitors, lights, regulating computer, and the special clothing used by the workers to prevent product contamination within the cleanroom.

TEXAS:

Legislative Update: Cleanrooms (September 1995):

Cleanrooms used in the production of semiconductor components are exempt as manufacturing equipment. That includes property affixed to or incorporated into realty, including integrated systems, fixtures, lighting, moveable partitions, piping and all property necessary or adapted to reduce contamination or to control airflow, temperature, and humidity. However, this exemption does not include the structural shell to which these improvements are attached.

NEW YORK:

Commissioner of Taxation and Finance, Advisory Opinion (Petition No. S940502B):

The issue was whether the installation of moveable walls in new or old construction is a capital improvement and whether a Certificate of Capital Improvement may be accepted on the sale of such moveable walls.

Section 1101 (b) (9) (I) of the Tax Law defines a capital improvement as an addition or alteration to real property which:

(A) Substantially adds to the value of the real property, or appreciably prolongs the useful life of the real property; and

(B) Becomes part of the real property or is permanently affixed to the real property so that removal would cause material damage to the property or article itself; and

(C) Is intended to become a permanent installation.

The criteria for a capital improvement must be met in their entirety. The inability to meet any one of the three conditions will prevent the property in question from qualifying as a capital improvement....Petitioner's moveable walls do not become a part of the real property and their installation is not intended to become permanent. Since the installation of Petitioner's moveable walls is not a capital improvement, it makes no difference whether the property in which they are installed is old or new construction.

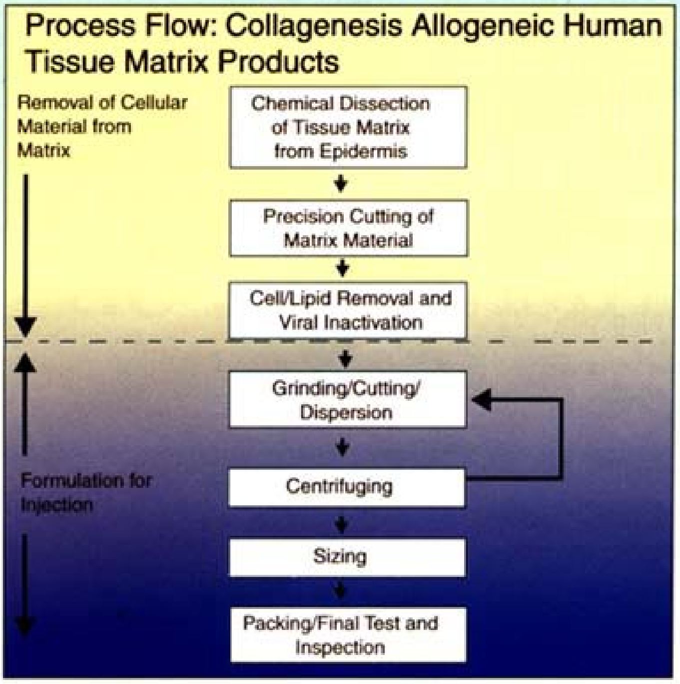
Given the opinions rendered above, it is clear that the Certificate of Capital Improvement could NOT be granted and that the modular cleanroom sale constitutes the sale of tangible personal property which remains tangible personal property after installation, and therefore only a completed tax exemption certificate is required. However, if a completed tax exemption certificate is not issued by the purchaser/owner, then the contractor is obligated to collect the appropriate state and local taxes and apply for a credit or refund of taxes paid on the purchase of the tangible personal property that remain (as tangible personal property) after installation.

Note: *Favorable opinions have recently been rendered in other states including AZ, CA, CT, ID, IN, MN, VA, and VT. A future article will review these issues.*

The decision to relocate an existing modular cleanroom, rather than build a new facility in the desired location, should be based not on any tax or financing advantages, but instead on the individual situation of the company. The central question is, how much production time can the company afford to lose? Is the normally shorter time required for the dismantling and relocation of an existing facility more advantageous than the time it would take to complete an entirely new project?

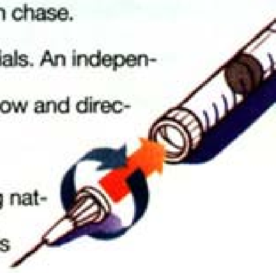
Tax Status

Within the United States, the tax status of moveable cleanrooms is determined on a state-by-state basis (see **Sidebar**). By and large, we find that the majority of states will rule, after



The seven-room, Class 100,000-Class 10,000 Collagenesis facility was completed in six weeks. The facility includes a scrub room, gowning room, corridor, and interlock doors opening into the biosafety suite. The latter includes a tissue prep room, inner and outer equipment rooms, and a stainless steel, double-door autoclave that opens through the stainless steel double-wall modular partition chase.

Magnehelic gauges monitor room differentials. An independent air handling system offers validatable airflow and directionality control.



Dermalogen™ provides a safe, long-lasting natural alternative to animal and synthetic implants for soft tissue augmentation in cosmetic and reconstructive procedures. It is processed using Collagenesis' patented, proprietary

consideration, in favor of modular cleanrooms, determining them to be moveable, tangible personal property and therefore not a permanent part of real property.

Local authorities will typically base their decisions on the following questions:

- Is the HVAC system independent of the building in which the modular cleanroom is housed?
- Does the cleanroom rely on the building for structural support?

Photo 3.
Moveable cleanroom walls and ceilings at Schering Plough's facility in Xochimilco (Mexico City, Mexico), allow flexible configurations of pharmaceutical production areas.

Leasing

All avenues of project financing should be compared on a discounted cash flow, present value basis. There may be times, however, when the cash flow advantage provided by the tax deductibility of operating expenses—utilizing a true operating lease—may prove attractive. Leasing, however, offers other significant advantages that may motivate some companies to examine lease financing. These include:

- Considerably faster recovery of equipment costs vs. standard depreciation;
- Preservation of credit lines;
- Innovative implementation of flexible payment structures;
- Built-in protection against equipment obsolescence;
- Flexibility: leases can be canceled (although the lessee would most certainly be required to pay a significant penalty to the lessor);
- Inclusion of preventive maintenance agreements or equipment or personal property taxes and insurance in the lease.

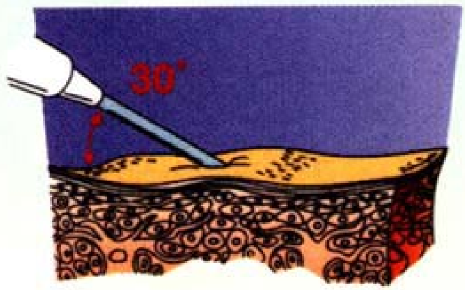
An operating lease (sometimes called a "service lease" or "maintenance lease") is an agreement that provides the lessee with the use of the cleanroom on a period-by-period basis. Normally the payments under an operating lease are insufficient to recover the full cost of the cleanroom for the lessor.

The contract period in an operating lease tends to be less than 75% of the usable economic life of the asset, and the lessor expects to recover the costs (plus return) from renewal rental payments. The lease does not transfer ownership at the end of the lease or provide for a bargain purchase

methods, which allow separation of HTM from donor tissue. This composition of intact collagen fibrils, elastic network, and proteoglycans provides a natural human matrix on which the patient's own collagen can grow.

Other Collagenesis products include the first of their kind to be made from patients' own tissue: Autologen™(1992), an injectable dermal implant to treat facial contour defects, and Vocalogen™(1994) for the treatment of glottic insufficiency. The company's Biobank™service allows patients to store their own tissue from cosmetic or other elective surgical procedures for up to five years, for later processing into Autologen and/or Vocalogen. No adverse reactions to either product have been reported.

Collagenesis has recently begun limited distribution of Urologen™, indicated for use in Grade III stress urinary incontinence in women due to intrinsic sphincter deficiency (ISD).



(Graphics courtesy of Collagenesis)

option. Therefore it can be treated "off the balance sheet" by the lessee and is not considered a sale/leaseback (as long as the IRS agrees that the contract is truly a lease and not just an installment loan labeled as a lease).

In rendering an opinion as to the operating nature of a lease, the IRS typically looks at the following:

- The remaining life of the equipment at the end of the lease term must be greater than 20% of its originally estimated useful life.
- The lease payments must provide the lessor with a reasonable return on investment.
- Renewal options must be reasonable, and related to the economic value of the asset.
- If the lease specifies a purchase price at the end of the lease period, that price must be based on FMV (Fair Market Value) at that time (most lessors claim that this typically will not exceed 10% of the original installed cost of the equipment).
- Limited use property (valuable only to the lessee) may not be leased (hence the restriction of this option to *modular* cleanrooms).

Most operating leases are written for a relatively short period of time, normally no more than five years. If, for example, a lessee desired a 60-month operating lease for a million-dollar modular cleanroom installation, lease payments (excluding taxes) would be in the range of approximately $20,000 per month. The actual monthly lease rate would be a direct function of the lessor's access to the credit markets and their desired return.

Future articles will address additional issues including sales and use taxes, as well as the growing number of states that have recently issued tax law rulings for cleanrooms.

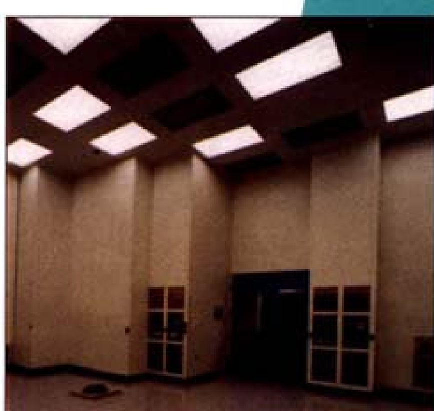


Photo 4.
Modular cleanrooms present virtually unlimited opportunities for rearrangement, even dismantling and moving, of entire facilities or their parts.