

Statement of Qualifications

Program Management

Introduction

Equilibrium is in the business of the life science work environment. We specialize in the infrastructure intensive facilities necessary to support the activities that our clients perform. We offer an integrated service approach, which brings together the most appropriate professionals in the industry to successfully deliver these complex facility projects. Depending on the type of project being pursued, the following is a list of tasks that may be required for a successful project completion:

Services

- Needs Analysis
- Programming Space Requirements
- Architectural Design
- Civil and Structural Design
- MEP Engineering
- Regulatory Consulting
- Validation Consulting/Execution
- Construction Bid Comparisons
- Value Management
- Schedule Tracking
- IT Infrastructure
- Equipment Selection, Procurement, and Installation
- Office Furniture Coordination
- Overall Project Supervision and Dispute Resolution

Process

A key to a successful project is to understand our client's long-term business plan. It is important to begin this process early and work with your staff to understand critical business objectives. Understanding the products and/or services your organization generates, allows our team to anticipate appropriate facility requirements.

We typically begin with a needs assessment to more clearly define your facility goals. Through a series of meetings and data gathering exercises, we will define the required spaces from the front lobby, to the offices, the laboratories and manufacturing areas, to document storage and the loading dock. Our experience in the life science industry allows us to understand your needs and *translate* these needs into a viable design. This design is completely dependent on needs, budget, and schedule.

Design is then integrated into "bricks and mortar" via the construction process. Our service offering couples programming, design and construction into one deliverable, resulting in a more efficient project with enhanced communications. Transition from design to construction is transparent and most often overlaps.

Throughout the entire process, from conception of a facility objective through construction, we will constantly inform and advise you of the risks or benefits associated with decisions. Equally important, we will maintain a detailed project record that will help minimize any project-related disputes. In short, we will guide you through this process in an informed, seamless manner.

In this effort, we are familiar with the various laboratory accreditations, which laboratories may require. This ranges from AAALAC accreditation for animal facilities, to GMP certification for FDA regulated production environments, to the various biosafety levels required to work with potential pathogenic agents. In addition, Equilibrium is familiar with various “decommissioning” protocols necessary to allow for construction/renovation work to occur within a laboratory work environment. This may range from simple disinfectant cleaning to chemical fixative gasing of biologic work environments, including biosafety cabinets and associated ductwork and filters.

Design-Build Projects

Often times, the need arises to have a project handled from "soup to nuts". In this form, Equilibrium takes on the role of a Turn-Key Design Builder. We bring together the appropriate professionals, such as architects and engineers, to assist in the programming of the facility. Then we take this program through design and into construction. This is an extension of our Program Management capabilities, which allows us to deliver the entire project to our clients under a single "contract".

Energy Efficiency Audits

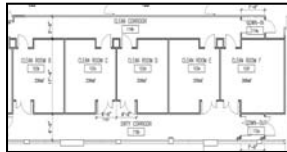
Laboratory facilities are notorious “energy hogs”, resulting in often times double and triple the utility costs compared to traditional office buildings. There are numerous ways to mitigate these elevated utility costs and the intention of our audit is to seek out these potential cost savings. We handle this through physical inspection of the facility, interviews with key facility personnel and department heads, plan and document review, and review of past and current utility bills.

In today’s competitive environment, it is important to trim costs wherever possible. As utility costs continue to increase over time, energy saving implementation becomes paramount to creating an efficient operation. In addition, there are ancillary benefits to these cost saving plans. There is the inherent “good will”, which will aid in public relations and promote an organization as a steward of environmental awareness. Another benefit is realized in employee retention and recruitment, as many workers will prefer to work within an organization that stresses “Green” in their operations.

Experience

Qiagen

Energy Efficiency Assessment and Facilities Consulting towards creating a more “cGMP” environment. Consulting efforts were focused on the Germantown Campus.



BioReliance

Renovation of BioReliance’s facility to facilitate their Cell Banking GMP Manufacturing Operations. The initial project budget was \$4.5 million, and the project closed out in July 2008 with a total cost of \$3 million.

ProMetic

Program Manager for a new cGMP protein purification facility, programmed to include GMP space for multiple product purification and associated ancillary space at an anticipated cost of \$5 million.



Tissue Gene

\$600,000 project to modify their new space at 9605 Medical Center Drive. The project includes minor modifications to the existing offices and wet labs, as well as the creation of GMP manufacturing space and a couple of laboratories.

Invitrogen

Program Manager for a cGMP revitalization project to create a new business unit for Invitrogen. The project was to create a cGMP Kit Manufacturing Capacity to compliment Invitrogen’s current kit manufacturing offerings.



Additional Project Experience

- **Vaccine Research Center** – *Gaithersburg, MD* – Program Manager/Construction Manager for the renovation of approximately 7,000 square feet, to include process gases, backup generator, laboratory equipment procurement, and general design and construction services. The project was accomplished in conjunction with Alexandria Real Estate Equities and The Henry Jackson Foundation.
- **Fisher BioServices** – *Germantown, MD* – Design Build Contractor for the creation of a Biorepository, including a new HVAC system and a unique electrical distribution system.
- **Intercell USA** – *Gaithersburg, MD* – Construction Manager for several projects ranging from the installation of a GMP cold box and associated architectural finishes, to a 15,000 Pilot Plant Upgrade for the production of vaccine products.
- **Jupiter BioScience** – *Frederick, MD* – Program Manager for a new 9,000 square foot Analytical Chemistry and GMP Production facility to house Jupiter’s US operations. The design integrates and energy efficient VAV supply and exhaust system coupled with low flow fume hoods, to reduce first costs and future operating expenses.
- **BioReliance Corporation** – *Rockville, MD* – Project Manager for several projects, including a new Cell Banking facility, R&D laboratories, a P-3 laboratory and various office/administrative projects. Jason managed all aspects of this projects, including the design, construction, and validation of the new facility.
- **Bridge Pharmaceuticals** – *Gaithersburg, MD* – Currently managing a small laboratory renovation project at Bridge’s Maryland Headquarters.
- **Invitrogen Corporation** – *Frederick, MD* – Project Manager for the renovation of Cell Banking’s cGMP facility. The facility is a 3,000 square foot, Class 10,000 cGMP sterile facility. Served as the project manager and construction manager, handling all of the project details and ensuring completion within budget constraints and a 6-week construction schedule.
- **UPM Pharmaceuticals** – *Baltimore, MD* – Project Manager for Construction Management Services for the installation of a class 100,000 cGMP clean room facility. The project consisted of approximately 2,500 square feet of manufacturing space and approximately 10,000 square feet of analytical chemistry labs, R&D labs, and associated administrative space.
- **Qiagen** – *Germantown, MD* – Management Consultant facilitating Qiagen in bringing their new North American Headquarters facility online. The project involved working with Senior Management Staff to focus on the project schedule of getting all major systems including manufacturing, distribution, and quality systems up and running within target dates.
- **McKesson** – *Rockville, MD* – Construction Management Services of a mezzanine deck and a walk-in freezer storage area for McKesson’s pharmaceutical repository capabilities. The project included building the freezer storage unit into the concrete slab to allow for forklift access and installing an Intergen fire suppression/pre-action sprinkler system.

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Life Science Facilities

- **Covance Laboratories** – *Chantilly, VA* – Project Manager for the build out of 25,000 square feet of laboratory and administrative space for Covance’s new Immunochemistry contract research facility. The project included an aggressive schedule with fit-out completed in under four (4) months and within budget.
- **Beta Rubicon** – *Fayetteville, AR* – Consulting services on the preparation of a white paper on Biomanufacturing for NIST. The purpose behind this paper was to establish the current market and demand for biomanufacturing facilities as biotechnology companies ramp up research and development efforts to full-scale manufacturing.
- **Intronn** – *Gaithersburg, MD* – Project Manager for the fit-out of approximately 10,000 square feet of laboratory and administrative space. This project included the installation of common laboratory equipment and systems for the future expansion of 25,000 square feet of space in what was designed and programmed as a later stage biotechnology incubator facility.
- **Aptus Genomics** – *Gaithersburg, MD* – Construction Manager for the fit-out of approximately 12,000 square feet of laboratory and administrative space. The project was completed on an accelerated schedule and a reduced budget.
- **MdBio** – *Frederick, MD* – Project Manager for the construction of a mobile laboratory within a tractor-trailer. The purpose of the mobile lab is to travel from school to school within Maryland and educate high school students in the biotechnology industry.

References



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Jason Rifkin
President, Equilibrium

BACKGROUND

Jason has worked in the life science industry for the past 15 years and brings extensive experience in the biotechnology and life science sector previously working for Celera Genomics as a Quality Control Supervisor and NeuralStem as a Researcher and Laboratory Manager. Jason has worked with Turner Construction Company as a life sciences construction market consultant and for Scheer Partners as a Senior Vice President in charge of Development and Construction of Life Science facilities.

Jason is the principal of Equilibrium and oversees Program Management and Design-Build projects for life science facilities. Jason holds a Bachelors of Science in Biology from the University of Maryland at Baltimore County, a Masters of Science in Neurobiology from Montana State University, and a Masters of Business Administration from the University of Baltimore. Jason also has published articles in peer reviewed scientific journals.

AFFILIATIONS

- ISPE, Chesapeake Bay Area Chapter, Past President
- MdBio
- VABio
- Technology Council of Maryland

EDUCATION

- MBA, *University of Baltimore* – June 2000
- MS, Biological Sciences, *Montana State University* – December 1996
- BS, Biology, *University of Maryland at Baltimore County* – December 1993
- GMP Facility Design, *University of Maryland Baltimore County* – May 2001
- QC/QA of Biotechnology Products, *University of Maryland Baltimore County* – December 1998

PUBLICATIONS

- Lo A, Rifkin J, Lefcort F, Oppenheim R. *Dynamic Expression of Avian Trk Receptors During Motoneuron Differentiation*. In preparation.
- Rifkin JT, Valerie JT, Anderson LW, Lefcort F (2000) *Dynamic Expression of Neurotrophin Receptors during Sensory Neuron Genesis and Differentiation*. *Developmental Biology*. 227: 465-480.
- Rifkin J, Danielson K, Lefcort F (1996) *Dynamic Expression of Trk Receptors During Sensory Neuron Differentiation*. *Soc Neurosci Abstr* 22:294.
- Rifkin J (1998) *The Transition to GLP*. ISPE, Chesapeake Bay Area Chapter, Newsletter. Vol.2(4).
- Rifkin J (2003) *Laboratory Construction Cost Issues*. *BioFacilities Bulletin*.

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- Jones A, Rifkin J (2005) *Pharmaceutical and Biotechnology Manufacturing Growth*. Pharmaceutical Engineering. 25(4):75-77.
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- Rifkin J, Goetz P (2009) *HVAC Efficiency Within a Controlled cGMP Environment*. Labs21 Annual Conference Presentation. Indianapolis, Indiana (<http://i2sl.org/labs21/conference/conference2009.html>)