

LIFE SCIENCES – BioTech / Pharmaceutical

Genentech

Process Development Lab



OVERVIEW

IES provide Chemical and Mechanical Engineering design services for a chemical dispensing system used to fill containers/reactor vessels from 500 ml to 100 liters. The system was designed to minimize the complexity of process controls, and provide ease of use for operators.

The chemical dispense system dispenses a variety of solvents direct to scale-up process development hoods. The dispense system uses 205 liter supply containers from a central Solvent Storage Room H3 hazardous occupancy.

PROJECT DETAILS

- New construction of a three story laboratory and scale up development lab consisting of 78,873 sq. feet
- Mixed occupancy B/H2/H3/H7 areas
- “Gas Pump” hose design for rapid filling of 100 liter reactors from up to eight feet away
- Two separate systems, one for light flammable solvents a second for heavy dense combustible solvent
- Flammable Vapor Detection and electrical shunt trip to reduce/eliminate the requirements for rated electrical devices.

IES SOLUTIONS

- Maximized Hazardous Materials storage quantities into separate control and spill zones/areas to eliminate the requirement for fire protection water containment.
- Integrated Flammable Vapor Detection and electrical shunt trip into five separate “zones” to maximize run up time, reduce false / nuance alarms.
- Selection of appropriate materials of construction for all wetted parts so as to not be detectable by highly sensitive analytical detection equipment.
- Minimized potential cost impact for expansion of non-GMP space to GMP space through an innovative approach.

LOCATION

South San Francisco, CA

TEAM (PARTNERS)

Architect: Flad Architects

PROJECT DURATION

Design & Permit: 12 months

Construction: 24 months

PROJECT VALUATION

\$5,000,000 - \$10,000,000

ABOUT IES

Integrated Engineering Services (IES) is an established firm providing innovative and cost-effective solutions to meet your complex engineering, design and operational needs.

When experience, knowledge and innovation matter most.

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