MORPHOTEK PILOT PLANT-

Design sustainable pharmaceutical facility

Arcus Design Group and Precis Engineering

XTON, PA — Precis Engineering, Inc. is providing mechanical, electrical, plumbing (MEP) and process engineering and commissioning services for Morphotek, Inc.'s new \$80 million, 60,000 s/f manufacturing pilot plant, under construction on Welsh Rd.

The Morphotek facility will house a biologics plant, laboratories, cGMP cell culture core area, warehouse storage, and offices to support the company's production of biologics for early-stage clinical trials. Completion is planned for spring 2011 with operations beginning in 2012.

"The building's design will tell the story of Morphotek's research and development toward new treatments for cancer and other diseases," said Precis principal Robert Dick, PE. "Glass-walled corridors will provide unprecedented access to view clean rooms, production suites, and mechanical systems in operation. The design will let executives tour the facility without having to put on clean-room garments."

Precis developed the engineering design using Autodesk Revit MEP software, a relatively new Building Information Modeling (BIM) tool with strong three-dimensional coordination abilities. The design team, including Precis and Arcus Design Group Architects, Inc., has used the new software to streamline the design and decision-making processes. In addition, Precis has generated three-dimensional animated videos that illustrate how the finished facility will look and how its state-of-the-art systems will function.



Morphotek Pilot Plant rendering

Arcus Design Group's architectural design incorporates curtain walls with high-performance, glare-minimizing reflective glazing; prefabricated, insulated metal wall panels; a white membrane roof; and Pennsylvania bluestone accents. Roof overhangs, solar shades, and light shelves maximize interior daylighting while minimizing solar heat gain. Recycled and renewable building materials, on-site energy generation, and an aggressive construction waste plan contribute to the building's sustainable features.

The interior design utilizes an open floorplan, daylight and occupancy sensors on the lighting to minimize energy usage, and Greenguard indoor air quality certified systems furniture.

"The architecture presents an aesthetic characteristic to the pharmaceutical industry with advanced environmental responsibility," said Arcus principal Carl Holden, AIA, LEED AP. "An accelerated construction timeline and design that accommodates future on-site energy generation will make the building sustainable not only from a design and construction perspective but also from a business standpoint."

The Morphotek pilot plant has been designed to achieve LEED (Leadership in Energy and Environmental Design) certification at the Silver level or higher. ■

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