the OUTRIGGER
R. Baker & Son Magazine - 11 Years Strong
Service-Disabled Veteran-Owned Business
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R. Baker Performs White-Glove Rigging In Project's Part II

Four years ago, R. Baker & Son performed selective demolition at a northern New Jersey facility, transforming several buildings at a high-tech manufacturing plant to a pharmaceutical facility. Baker also received, stored, delivered, assembled and set all new process equipment in place in the newly renovated facility during the project. From the beginning of the project, the pharmaceutical client planned a future expansion, so space was reserved within the heart of the facility for future process equipment. **Earlier this year, R. Baker & Son returned to perform the second phase of the project.**

Phase Two was trickier than the first as the facility was no longer a construction site but a fully-functioning manufacturing plant. A detailed plan and schedule were required to complete the project over a long weekend with minimal interruption. Various equipment, including a 15,000 lb. lyophilizer chamber, a large refrigeration skid, a condenser, multiple control panels, and prefabricated pipe and wire assemblies were rigged through a removable panel on the side of the structure. Floors were protected along each route and shored up in some areas to bear the live loads. Ceilings were removed and reinstalled in several areas to accommodate the equipment.

After weeks of preparation and coordination, the project officially began on a Friday morning. By Sunday evening, all equipment had been installed with extreme care to precisely line up with factory pre-fabricated piping, ceilings were reinstalled, and floors were restored to their original condition. R. Baker's portion of the project was completed on time and handed off to mechanical and electrical teams to make the necessary connections. The client was twice satisfied.

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Demolition of NJ Museum Wall Reveals Rare Wine Collection

Workers renovating Liberty Hall Museum at Kean University in Union, NJ, found a rare treasure last summer when they broke through a wall to a hidden wine cellar. Inside were 50 bottles and 42 demijohns of rare Madeira wine dating back as early as 1769. It is the oldest known collection of Madeira in the United States.

Liberty Hall was built in 1772 as the 14-room country home of William Livingston, New Jersey's first elected governor. The estate was purchased in 1811 by the Kean family, who established Kean College on the property in 1855 and over time expanded the house to a 50-room mansion. The house began its transformation into a museum in 1949.

Historians and Kean family members knew the wine cellar stood behind a plywood and plaster wall built during Prohibition when last year's renovation began, but had no idea of the age or significance of what it held. Some of the Madeira bottles, still labeled with handwritten tags, were purchased in celebration of the presidency of John Adams, who took office in 1797. While most other wines would have turned to vinegar by now, Madeira is a sweet, fortified wine that is exceptionally long lasting, and wine experts say much of it is probably still drinkable. Liberty Hall President John Kean tried a 147 year-old sample and said it tasted like sherry. The value of the collection has not been made public, but rare wine experts have estimated that each bottle may be worth between $10,000 and $25,000.

The wine cellar's restoration included removal of a layer of concrete to reveal the original brick flooring and repair and reinforcement of the wooden wine rack. It is now open to visitors.

R. Baker & Son Specializes In Plant Relocation

Relocating a plant can be a complex undertaking, one that requires close coordination, meticulous planning, and good communication among contractors, owners, designers, and facility personnel. A poorly-executed plant relocation project can result in runaway costs, prolonged downtime, lost production, and a damaged reputation. R. Baker & Son is a long-established expert in plant relocation that can ensure a smooth and successful transition.

Before any work can begin, a plant relocation contractor must thoroughly understand the intricate web of day-to-day plant operations, including products and method of production, plant machinery, and utilities. A detailed, multi-phased, coordinated plan is developed to seamlessly ramp down the vacating facility while simultaneously phasing in production at the new plant. Existing equipment is assessed to determine which will be relocated and reused, verifying that it meets local code at the new facility, and whether it will require modification, repair or refurbishment. 3D building information modeling (BIM) of the new facility's mechanical and structural building components is used for planning utility and equipment placement. *Continued on page 3*

OSHA Issues New Crystalline Silica Standard

Crystalline silica is a common mineral that can be found in a variety of building materials including sand, stone, concrete, brick, block, and mortar. Silica can pose a serious health hazard on construction and demolition projects when workers chip, cut, saw, drill, crush, blast or grind objects that contain the material and the resulting particles, which are at least one hundred times smaller than ordinary sand, are inhaled. Excessive exposure to respirable crystalline silica can cause serious and sometimes fatal ailments such as silicosis, lung cancer, COPD, and kidney disease. Ninety percent of the 2.3 million workers exposed to silica dust each year are employed in the construction industry.

OSHA recently issued a new Respirable Crystalline Silica Standard requiring employers to use engineering controls to limit worker exposure to respirable crystalline silica on the jobsite. Once the full effects of the rule are realized, OSHA expects it to prevent more than 600 deaths and 900 new cases of silicosis per year. The standard includes a revision of the Permissible Exposure Limit (PEL), switching from a formula to a more-reliable set value. A written exposure control plan must be developed whenever high exposures may occur, and a competent person must be designated to implement the plan.

Engineering controls for keeping exposure at or below the PEL include local exhaust ventilation and other dust suppression measures, such as vacuums, wetting, and water misting, as well as process isolation. Housekeeping practices that may expose workers to silica, such as use of compressed air and dry sweeping, must be restricted where safer alternatives are available. Respirators are only allowed when engineering and work practice controls cannot maintain exposures at or below the PEL. Employers are required offer medical examinations, including chest X-rays and lung function tests, every three years for workers who are required to wear a respirator for 30 or more days per year according to the standard, and must keep records of workers' silica exposure and medical exams.

R. Baker & Son is in full compliance with the new OSHA Respirable Crystalline Silica Standard for Construction and has conducted both in-house and off-site training with employees. You can find the full Small Entity Compliance Guide for the Respirable Crystalline Silica Standard for Construction here.

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Equipment slated for relocation must be meticulously identified, logged, disassembled, match-marked, and readied for shipment, and utility connections and separation points must be accurately recorded. All structural modifications must be completed at the new facility to accommodate the new equipment. Necessary utility systems, including electrical substations and distribution, IT racks and switches, building automation systems, and process control systems, must be identified, designed and installed to ensure that equipment installation, testing and commissioning can occur without a hitch. In addition to relocating and installing existing equipment, a project may require purchase and installation of new equipment.

R. Baker & Son has performed hundreds of plant relocations across the globe. To find out how Baker can help you plan and successfully execute your plant relocation project, contact us at 732-222-3553.