

Client:

CH2M Hill (Enterprise Spatial Solutions)—Pfizer

Project:

Core drilling of concrete walls, as a part of a project for mechanical penetrations, was planned for at Pfizer's manufacturing facility in Kalamazoo, Michigan. However, prior to drilling, the project consultant, CH2M Hill, needed to locate the reinforcing steel inside the walls in order to preserve structural integrity and prevent damage to the site.

Plan:

Diamond Subsurface Imaging developed a plan to survey all of the of the wall sub-surfaces by using Ground Penetrating Radar—GPR SIR 20 systems, with Radan software and onsite 3D capabilities.

Process:

Diamond scanned 16 locations of 8" thick concrete wall on 4 different floors. A 2'x2' area around each location was targeted to allow for core drilling location adjustments. Scans were completed using the 1500 mHz antenna (structure scan). Because of accessibility issues, 12 of the 16 locations had to be scanned using a lift operated by the Diamond Subsurface Imaging technician (MIOSHA certified operator). At each area, the actual locations of reinforcing steel were clearly identified and marked so that there would be no doubt as to their location.

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Outcomes:

By locating and verifying all of the steel reinforcement Diamond delivered to CH2M Hill a survey indicating areas free of reinforcement where holes could be drilled. According to Mark Jackson, CH2M Hill Project Manager, “Because Diamond had not performed a ground penetrating radar survey for us directly in the past, it was important that we evaluated their work thoroughly before the project. Diamond performed 16 radar surveys to locate reinforcing steel in an 8 inch thick concrete wall to insure that all the steel remained intact after core drilling. The radar surveys allowed the subsequent core drilling to be completed successfully and all reinforcing steel was avoided. Diamond’s technicians were professional throughout the project and their performance met all of our expectations. I have recommended to Pfizer that Diamond should be contacted again should radar services be required in the future.”

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