



Former D.R. Sperry Foundry, North Aurora, Illinois

Fountainhead Engineering LTD (FHE) was retained by a foundry and fabrication company that had been operating as a foundry located adjacent to the Fox River in Kane County, Illinois for over 100 years. In 2000 the Illinois Attorney General's Office filed a lawsuit against the owners of the company for alleged violations of state of Illinois Environmental Protection Act related to solid waste, stormwater and air compliance issues.

On behalf of the client FHE reviewed the technical and regulatory aspects of the complaint and provided regulatory compliance as well as field services to assess potential alleged environmental threats. After performing a multimedia site evaluation (water, waste and air) at the foundry site as well as on former foundry sand storage areas adjacent to the foundry, FHE instituted interim site control measures (for stormwater management) on spent foundry sand stockpile. Interim diversion berms were constructed to redirect foundry stormwater flows towards a newly constructed sediment basin away from the Fox River as well as a tributary that traversed the project site. A limited subsurface investigation (LSI) was conducted as well as stockpile sampling. Laboratory results from samples obtained during site investigations indicated potential for beneficial reuse of a portion of the spent foundry sands.

A beneficial reuse plan was developed that included on-site (mechanical) screening of spent foundry sand stockpiles (to remove old casts and molds from historic operations) and a significant portion of these stockpiles were beneficially reused (almost 500 tons). Remaining sands adjacent to the site were removed and the site was re-graded to modify the existing drainage patterns to allow for more effective stormwater management including re-directing storm flows away from a small stream that was previously contained within a former underground culvert partially exposed above ground before draining into the Fox River.

The existing air permit for the foundry operations as well as related production records were reviewed to provide a basis for determining that the facility had operated in substantial compliance with existing air quality standards and facility permits. Record keeping procedures related to foundry production was modernized resulting in the conversion of the former (manual) record keeping

system to a more dynamic digital storage format with menu driven inputs and automatic summary functions to eliminate any potential future reporting or operational issues. Staff was trained on this new system coordinated with Best Management Practices for stationary sources operated by the foundry.

A Compliance Plan for the entire site (production and yard storage area) was developed addressing the outstanding regulatory issues to support clients' settlement negotiations with the Illinois Attorney General's office. As part of the site redevelopment (i.e. Brownfield) the land formerly occupied by the foundry and a portion of the adjacent sand stockpile area was approved for a residential multi-family complex (Townhomes). FHE developed demolition and erosion control plans for the site developer and the site achieved regulatory compliance prior to redevelopment by others.