



### **KCS Schweiger Industries Jefferson, Wisconsin**

Fountainhead Engineering LTD (FHE) was retained by KCS International to address outstanding existing compliance issues after the acquisition of the former furniture manufacturer (which was in bankruptcy). FHE initially performed a multi media (soil, water and air) compliance audit. Based on results of the audit a Phase II Subsurface Investigation was performed to delineate a chemical plume that appeared to be migrating towards an onsite drainage channel which eventually flowed into a nearby river. The results of this investigation revealed that the plume had migrated horizontally from a point of origin near a loading dock several hundred feet away.

After completion of several supplemental investigations at the site a Remedial Action Plan (RAP) was developed to address chlorinated solvent contamination in soil and groundwater. After approval of the RAP by the WDNR, FHE mobilized to the site and performed the approved remedial activities which included removal of impacted soils (several hundred cubic yards) above a clay layer that intersected the site. Confirmation soil samples obtained during excavation using an onsite mobile laboratory that provided daily onsite analytical verification that impacted soils were removed minimizing over excavation of clean soils. Additional temporary monitoring wells were also installed at the site to further delineate a groundwater plume and initial (groundwater) results were obtained also using the onsite mobile laboratory. Modified groundwater cleanup standards were proposed and accepted for this assignment the site was able to obtain limited liability protection under the newly enacted state of Wisconsin Recycled Lands Act.

Ongoing efforts conducted on behalf of the client at this site included research of alternative stains and economic impacts of switching the Application Line to all water based products (from oil based products). An economic assessment of using water based paints and solvents and/or implementation programs for immediate VOC reduction was simultaneously initiated, at the request of the WDNR. Pilot tests were completed as were VOC air quality testing and averaging analysis before a determination could be made on potential plant re-engineering. Low VOC stains were adopted by the facility.

The firm also developed boiler specific testing protocols for modified Method 11 emissions testing incorporating on-site mobile laboratory analysis of target compounds (from flue gas samples) after the switch to water based stains was made. Subsequent compliance tests indicated that new permit limits established for the existing boiler system which include a “waste wood” boiler could be achieved. A final regulatory report with all supporting analyses summarizing all data from all analysis confirmed that the facility could meet new emissions limits and new air quality permits were issued to the new owner. Alternative boiler operating procedures were instituted and modifications were made to existing biomass boiler in order to achieve “good combustion practices”.

After removing of impacted TCE soils, widening the existing drainage channel and added flow velocity features the banks of the on-site drainage channel were re-graded and additional other minor drainage modifications were made to the site FHE developed a new comprehensive stormwater management plan for the Jefferson, Wisconsin plant as well as developed SPCC Plans (for emergency response to future spills or incidents) including Emergency Planning, Community Right-to-Know, and Tier II and Form R submissions to the WDNR for the Jefferson, Wisconsin plant. New compliance staff was hired to maintain permit conditions and manage regulatory compliance for the company.