ST. JOHN - MITTELHAUSER & ASSOCIATES

CLOSURE OF INDIANA CHLORINATED SOLVENT SITE WITH SOIL AND GROUNDWATER IMPACTS

St. John – Mittelhauser & Associates (SMA), in cooperation with the Indiana Department of Environmental Management's Voluntary Remediation Program, the Town of Middlebury, and neighboring property owners, obtained regulatory closure for soil and groundwater impacts associated with the Former Syndicate Systems Site in Middlebury, Indiana. The facility, which is situated in an area of Middlebury used for a mixture of commercial, industrial and residential activities, was historically used for the production of metal fixtures, including metal plating activities and the use of various solvents for parts cleaning. Soil and groundwater impacts originating from the Site were found to include priority pollutant metals, petroleum and chlorinated volatile organic compounds (VOCs). Groundwater impacted multiple off-Site properties. The closure represents the successful completion of a combination of active remedial measures, modern day risk assessment, and the execution of appropriate institutional and engineering controls to protect human health and neighboring ecological receptors.

Environmental investigations at the Site originally began in 1970 with the investigation of contaminant impacts associated with a former on-Site metals absorption pond, which was historically used for the disposal of plating wastes. Subsequent investigations identified multiple commingled petroleum and chlorinated VOC groundwater plumes originating from both on- and off-Site locations within the local area, including leaks from the municipal sanitary sewer system. Early remedial efforts by others included the operation of a groundwater pump & treat system for nearly a decade, which was found to be ultimately ineffective. SMA was brought into the project to reevaluate remedial alternatives, and ultimately bring the environmental issues with the Site to closure.

SMA's approach to obtaining closure for both Soil and Groundwater impacts included:

1. Demonstration that the mobility of priority pollutant metals impacting soil and groundwater were too low to pose a risk to human or ecological receptors within the local area;

2. Targeted in-Situ bioremediation within VOC source areas for groundwater impacts, resulting in the stabilization of the groundwater plumes originating from these areas;

3. Demonstrations that residual groundwater impacts in the local area are stable through a multiple lines of evidence (LOE) approach, including rigorous statistical evaluations; and

4. Execution of appropriate institutional controls, including both environmental restrictive ordinances and deed restrictions on affected properties, to assure both human health and ecological receptors will be protected in the future.