



BROWNFIELDS REDEVELOPMENT

Representative Project Experience

KERAMIDA has obtained regulatory closure on more than seventy cleanup projects over the last five years, under various state and EPA regulatory programs, including Brownfields. We have provided Brownfields Redevelopment Services over the years for a number of public and private Brownfields stakeholders throughout Indiana and Ohio. As a result of KERAMIDA's involvement, Brownfields stakeholders have received numerous grants for the assessment and cleanup of several redevelopment projects.

The following are four representative projects that profile KERAMIDA's experience with Brownfields Redevelopment.

Closed Foundry Site

KERAMIDA's risk assessment and remediation activities helped a community recycle a former gray iron foundry site into a new county jail. After completing a comprehensive site investigation, KERAMIDA conducted precise removal activities and a risk assessment for this property. There was a high level of public concern regarding the potential risk of exposure to environmental contamination for workers and inmates. KERAMIDA facilitated an ongoing community dialogue and provided the local officials with written materials for use in communicating the progress and results of the investigation and remediation activities to the public. In 2002, the State of Indiana issued a Comfort Letter, concurring with the conclusions of the risk assessment that the development and use of the Site for a jail is not expected to pose unacceptable risks to either workers or inmates at the jail. This property is now an integral part of downtown Richmond, Indiana.

Former Auto Parts Manufacturing Facility

A former steel and aluminum automotive components manufacturer will be the centerpiece of Scottsburg's economic revitalization due in large part to KERAMIDA's unique and innovative remedial approach. U.S. EPA awarded this Site a \$200,000 cleanup grant to assist with its redevelopment, based on KERAMIDA's proposal. KERAMIDA also assisted the City in obtaining a \$333,000 Remediation Grant from the Indiana Office of Rural Affairs. The property is entered into Indiana's VRP. KERAMIDA has completed a comprehensive investigation of the property, including groundwater delineation that identified both on- and off-site contamination sources. KERAMIDA also developed a conceptual Remediation Work Plan for the Site. KERAMIDA is currently implementing a remedy that includes source removal, residual treatment by phytoremediation and off-site exposure prevention.

Former Rail Yard Facility

To serve underprivileged youth and attract future economic growth on Indianapolis near east side, a former rail yard facility will be developed into a youth golfing academy complete with a par 3 course and driving range. To achieve regulatory closure and make this project a reality, KERAMIDA completed a comprehensive Site characterization and human health risk assessment (HHRA) to evaluate potential adverse health effects from Site-related contaminants. The findings of the HHRA are incorporated into final design plans that will determine appropriate locations for Site facilities and appropriate engineering controls to enable successful completion of the project and protect human health and the environment.

Former Jackson Iron and Steel Company (JISCO), Jackson County, Ohio

The former Jackson Iron and Steel Company, located in Jackson County, Ohio, is a Brownfield site, which was used from the late 1800's to 1968 to manufacture iron and steel. Jackson County had many suitors for the site but the environmental conditions have made it impossible for anyone to risk investment. In 2003, KERAMIDA personnel assisted the County with a \$270,000 Clean Ohio Assistance Fund Grant for Phase II Environmental Site Assessment dollars. KERAMIDA personnel were contracted to perform a comprehensive Phase I & II Environmental Site Assessment in accordance with ASTM 1527-00 Standards and the Ohio Voluntary Action Program Standards. As part of the Phase I, we performed local, state, and federal regulatory searches, a detailed site inspection, tracked down and interviewed several former employees, performed a complete chain of title search, reviewed all appropriate surveys and topographic maps. KERAMIDA identified potential risks associated with the property that resulted in the preparation of a Phase II assessment scope of work.

KERAMIDA personnel completed delineation of soil and groundwater contamination at the property by installing soil borings, groundwater monitoring wells analyzing soil and groundwater samples, sampling and quantifying suspect asbestos containing materials, stream sediments were sampled and a former waste water treatment system was sampled (sediments and water). KERAMIDA completed the delineation in a step-wise fashion that allowed precise targeting of those on-site areas requiring further investigation to meet VAP requirements for characterization of contaminant plumes. The data gathered during the delineation indicated the chemicals of concern in on-site soil were metals and petroleum compounds. The data further revealed the likely source area for the contamination (i.e. those on-site areas with contamination above the VAP Non-Residential Cleanup Goals). KERAMIDA also evaluated the hydraulic properties of the shallow water-bearing unit at the property and conducted a preliminary evaluation of potential human health risks associated with the contamination. The data resulting from the delineation assessment were used to develop remedial alternatives for the property.

Upon completion of site investigation activities, a remedial action plan was prepared to address areas of concern at this large Brownfield site. In spring of 2005, KERAMIDA personnel wrote a \$2.3 million Clean Ohio Revitalization Grant for Round 3. In December 2005 Jackson County was awarded the funding. KERAMIDA is the consultant for the CORF project. KERAMIDA is currently managing the remedial efforts for the JISCO site. Remedial activities include the removal and disposal of in excess of 8,000 tons of asbestos containing debris, demolition of approximately 20 structures on-site in various states of condition, demolition of over 25 railroad piers and site grading. KERAMIDA also coordinated the clearing and grubbing of the site associated with the approximate 35 years of uncontrolled growth. Future work includes removal of approximately 1,600 tons of impacted soils and closure of an unregulated underground storage tank.

Future plans for the site upon completion of remedial activities include excavation of contaminated soil, removal of underground storage tanks, demolition of existing structures and rebuilding of a new facility to repair railroad locomotives. US Rail plans to redevelop the property as a locomotive and rail repair facility that will employ 50 people. The addition of 50 well paying jobs would be a significant economic gain for Jackson County. The jobs created will far exceed minimum wage at an estimated \$15-\$19/hr. Total investment in the JISCO redevelopment is estimated in excess of \$5,000,000. The post clean up value will be in excess of 10 times the current auditor value of the property. US RAIL is providing over a 40% match to the project.