CASE STUDY

ATL Used in System Expansion for Coal Mine's Worker Facility

Sturgen, IN

SYSTEM SPECIFICATIONS
3,150 GPD Wastewater Treatment System

INSTALLATION DATE
Fall 2015

PRODUCTS
Advanced Treatment Leachfield (ATL) combined treatment and dispersal system

ENGINEER
Kruse Consulting, Avon, IN

INSTALLER
Hacker Plumbing and Drilling, Vincennes, IN

DISTRIBUTOR
Wholesale Drainage Supply, Inc., Shelburn, IN

DESCRIPTION

An Indiana coal mining operation needed to expand worker facilities which facilitated the need for an expansion to their existing wastewater treatment system. The reduced footprint of the onsite wastewater treatment system was critical due to the presence of disturbed of mine spoils, shale, and limestone throughout the site making system siting a challenge. The Department of Health had assigned a loading rate of 0.25 GPD per square foot for disturbed soils, but the significant voids between boulders threatened to short circuit effluent. Extensive soils investigation and testing were conducted to locate the 3,150 GPD system over soils where there were not as many potentially large voids that would allow effluent to migrate into the native soils without proper treatment.

ATL by Infiltrator is a modular geotextile media, sand-lined wastewater treatment and dispersal leachfield system that is quick and easy to install, has no moving parts, and no venting or additional sand cover requirements. Effective in shallow, level, sloped, subsurface, and above ground system designs, the ATL by Infiltrator has passed the NSF 40 Class 1 protocol.

Dale Kruse, P.E., of Kruse Consulting designed the ATL by Infiltrator system to treat the effluent from locker room showers before it enters the disturbed soils. Effluent exits the facility via a 4-inch PVC pipe then enters the first septic tank. It then flows to a pump tank where it is dosed twice daily using on-demand alternating pumps to four 102- x 22-foot Infiltrator ATL beds creating a 408- x 88-foot-wide drainfield. To ensure the proper distance between conduits the system installer, Mark Hacker with Hacker Plumbing and Drilling, designed and fabricated five spacers from reinforced 1-inch PVC pipe. Effluent exits the ATL system and is absorbed into the underlying native soil. A total of 2,000 feet of ATL piple was used in the installation of this system. Each zone took two days to install, then it was covered with 12 inches of topsoil hauled from another area of the mine and seeded.

Infiltrator Water Technologies
Part of ADS