



Maryland Department of the
Environment

FACTS ABOUT: MARYLAND SAND GRAVEL AND STONE

SITE LOCATION

The Maryland Sand, Gravel and Stone (MSGs) site occupies about 150 acres of land west of Elkton, Cecil County, Maryland. The facility is situated south of the intersection of Marley Road and Nottingham Road and on the north side of Route 40.

SITE HISTORY

The site was operated as a sand and gravel quarry under the name Maryland Sand and Gravelstone Company. Quarrying operations were conducted in two areas known as the Eastern Excavation Area and the Western Excavation Area. About three acres of the Eastern Excavation Area reportedly were used for the disposal of waste processing water, still bottoms, sludge and drums of solid and semi-solid waste between 1969 and 1974. Three pits in the Eastern Excavation Area were used as surface impoundments where approximately 700,000 gallons of waste were disposed.

Following a fire on the site in 1974, 200,000 gallons of liquid waste were removed from the site by the owner/operators and disposed at Kin Buc Landfill, Edison, New Jersey. The drums and sludge that remained following the removal of the liquid waste were reported to be buried on-site in excavated pits.

ENVIRONMENTAL INVESTIGATION AND ACTIONS

The U.S. Environmental Protection Agency (EPA) performed an initial site assessment in 1979. EPA re-evaluated and sampled the site in 1982. The site was placed on the National Priorities List (NPL) in September 1983. The EPA, Region III has divided the MSGS site into three phases or operable units. Operable Unit 1 (OU1) consists of the shallow groundwater contamination and buried drums. Operable Unit 2 (OU2) consists of contamination in the deeper aquifers and a possible waste source in the Western Excavated Area. Operable Unit 3 (OU3) consists of contaminated soils.

Remedial Investigation/Feasibility Study (RI/FS) activities for OU1 began in 1984 and were completed in 1985. Volatile organic compounds (VOCs), semi-volatile organic compounds and metals were found on site in ponds, seeps, sediment, subsurface soils, and the shallow groundwater (aquifer). The OU-1 1985 Record of Decision (ROD) addressed the removal of buried drums, on-site treatment of shallow groundwater contamination in the Eastern Excavated



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Area, surface water seeps and restricted access to the site. The final disposal of the drums and cement mixer barrels was completed in 1991.

Construction of the OU-1 groundwater treatment system began in September 1995 and the system was in operation by February 1996. Contaminated shallow groundwater and surface water seeps are intercepted in groundwater trenches, treated in the on-site groundwater treatment plant and discharged to a nearby stream. In the Summer 2001, the groundwater capture system was augmented with the installation of two extraction wells in between two of the collection trenches. The groundwater treatment system has been fully operational since the Spring of 1996.

The OU2 RI/FS began in 1985 and was finalized in 1990. On-site VOC contamination was found primarily in the upper sand aquifer, with only trace amounts found in groundwater from the middle sand aquifer. It was also determined that no waste disposal occurred in the Western Excavated Area.

Remedial activities outlined in the OU2 ROD (September 1990) included the installation of additional monitoring wells and on-site and off-site groundwater monitoring. Point of use treatment of off-site wells would be initiated, if required. To date, this has not been implemented. One residential well was found to contain site-related contaminants and it was replaced with a deeper well.

EPA released the OU3 Proposed Plan in July 2002 and finalized the ROD in October 2002. The ROD addresses contaminated soil and sediment in the Eastern Excavation Area and provides the final response for contaminated shallow groundwater at the site. The selected remedy calls for excavation and treatment of principal threat contaminated soils using low-temperature thermal desorption technology. The remediated soil was backfilled on-site. The existing contaminated groundwater treatment system was expanded and continues to operate at the site. Combining these trenches into one long collection trench eliminated an open area that existed between collection trenches #1 and #2. Enhanced biodegradation augmentation was applied to saturated soils and groundwater where contaminants in groundwater exceeded cleanup levels. The remedy includes long-term monitoring and institutional controls.

On-site soil remediation addressed 57,500 tons of contaminated soil, which were excavated, treated using thermal desorption, and backfilled on-site. Additionally, contaminated soil and wastes were removed off-site to an approved hazardous waste disposal facility. In 2011, a bio-venting system was installed and activated on-site in order to provide oxygen for bioremediation of the remaining soil contamination. Operation of the groundwater capture and treatment system will continue until the chemicals of concern have been addressed.

CURRENT STATUS

Remedial activities for soil and groundwater contamination are continuing.



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