



**Tennessee Department of Environment and Conservation  
Division of Water Pollution Control  
Mining Section  
3711 Middlebrook Pike  
Knoxville, Tennessee 37921-6538  
Phone (865) 594-6035 Fax (865) 594-6105**

**November 6, 2009**

## **NOTICE OF DETERMINATION**

*Application for renewal and modification of an NPDES permit to discharge treated wastewater and stormwater into Duncan Branch in Blount County.*

**Vulcan Construction Materials, LP  
2215 Olan Mills Drive, Suite A  
Chattanooga, Tennessee 37421**

**Maryville Quarry  
1965 Court Street  
Maryville, Tennessee**

**NPDES Permit TN0003042**

A public hearing was held on May 14, 2009, at the Blount County Library in Maryville, Tennessee, to consider comments concerning this NPDES permit application. The facility consists of a limestone quarry, sand plant, pugmill, stockpile and overburden storage areas, and scale house/office building. The permit modification is for the addition of 13 acres. The total permit acreage with the addition includes 405 acres.

Discharges from the permit modification will be controlled by existing sediment control and treatment structures. The receiving stream, Duncan Branch, is not included on the state of *Tennessee's Approved 2008 303(d) List* of impaired waters nor is the stream designated Exceptional Tennessee Waters (ETWs) or Outstanding National Resource Waters (ONRWs).

Approximately 32 people attended the hearing for this permit application. This group included property and homeowners, local residents, public officials, and other concerned citizens. Nine (9) people offered testimony during the hearing. Map and photographs were submitted for the public hearing record.

Introductory remarks by the hearing officer included a summary of the proposed project, the hearing procedure, and decision process. During the comment period following the hearing, the Division received numerous written comments, petitions, research literature, and e-mails. The comment period ended on May 26, 2009.

## Comments and Responses

Please note that a few of the comments (both oral and written) are not included in this document because: 1) they were not related to the proposed project, 2) required a response that would be speculative and without direct relationship to the project, or 3) there was not enough information or verification given with the question to provide a proper response. However, all comments received are part of the hearing record and are considered by the Division in making the determination for this NPDES permit application.

### A. Water Quality, Regulatory, and Administrative Items

In response to testimony offered by several commenters during the public hearing we said that we would refer certain questions and requests to our Office of General Counsel in Nashville for clarification, guidance, and direction. These comments and requests and our approved responses follow (comments presenting identical or similar concerns or requests are grouped together):

*The City of Maryville and Vulcan Construction Materials, LP, have entered into a Settlement Agreement that includes a requirement that the company continue to pump water from the quarry pit into Duncan Branch to maintain stream flow levels. We request that TDEC be as stringent as the Settlement Agreement regarding maintenance of flow levels in Duncan Branch. The permit should mandate that continuous flow be maintained in Duncan Branch.*

*We request that TDEC determine whether or not the Settlement Agreement can be incorporated into the NPDES permit for the Maryville Quarry and made part of the conditions and requirements of this permit.*

According to TDEC's Office of General Counsel, we do not have the authority to incorporate the Settlement Agreement into this NPDES permit. Although Vulcan is obligated to comply with whatever it has agreed to in the Settlement Agreement, that does not give TDEC the authority to impose these requirements. The mechanisms for enforcement of a Settlement Agreement and a permit are different.

The company currently monitors stream flow measurements at the bridge crossing for Court Street. The permit renewal and modification will continue this flow monitoring requirement. The measurement frequency is daily.

Based on this monitoring requirement, the Division will be able to confirm any loss of water from Duncan Branch. We will also be able to identify interruptions in stream flow based on Vulcan's discharge activities through site visits, inspections, and surveys.

*The quarry is located in karst topography and sinkholes have developed along Duncan Branch and on properties surrounding the facility. Sinkhole development has been associated with quarry activity since at least 1980 and has accelerated in recent years. Quarry activity involves pit dewatering, thus extracting ground water from the*

*surrounding land, lowering the water table, which can lead to land subsidence, and subsequent damage to residential properties and homes. Who or what agency do we contact concerning protection of ground water which supports the karstic land under the 4,000 homes within a one mile radius of the quarry?*

*The quarry operations are affecting ground water in the area. The quarry excavation can cause hydrologic pressure, cause sinkholes, and impact ground water. Who (what agency) can property owners contact regarding ground water under their homes?*

Environmental agencies with ground water authority in Tennessee include the Division of Water Supply. This Ground Water Management Program of this Agency involves source water assessments and protection for public water systems relying on surface water, underground injection control and ground water contamination investigations, and cross program/Agency coordination on ground water and source water protection. The agency may be contacted at the 6<sup>th</sup> Floor, L & C Tower, 401 Church Street, Nashville, Tennessee 37243, telephone (615) 532-0191 or by email at [watersupply@tn.gov](mailto:watersupply@tn.gov).

NPDES permits do not authorize discharges to the ground water. Discharges impacting ground water would be a violation of the permit and the Tennessee Water Quality Control Act and subject to appropriate enforcement action. The permit, moreover, does not preclude the institution of legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or *The Federal Clean Water Act of 1977*, as amended.

Vulcan Construction Materials, LP, has assisted property owners in the area to obtain general ARAPs for the repair of sinkholes located in the streambed of Duncan Branch. The repair work is designed to stop or reduce any loss of flow from Duncan Branch. The agreement with the City of Maryville also provides that Vulcan Construction Materials, LP, will continue efforts to repair sinkholes on property not owned or leased by the company and which occur thirty (30) yards on either side of Duncan Branch from the point of discharge downstream to the Court Street bridge.

*We question the accuracy of the monitoring reports from the company which indicates all flow measurements of discharge from DMP to be less than 700 gallons per minute (gpm). We request that TDEC check the accuracy of these measurements. We also request that TDEC monitor the quarry discharge and water levels of Duncan Branch more frequently.*

Flow measurements for DMP 001 are estimates based on best professional judgment by Vulcan Construction Materials, LP. The company subsequently will determine the flow estimate based on the number of pumps operating and the flow rate of these pumps. This will provide a greater degree of accuracy in the flow estimate at DMP 001.

The NPDES permit requires that stream flow of Duncan Branch be monitored daily at the Court Street bridge. The company is also required by agreement with the City of Maryville to maintain at all times no less than a flow rate of one (1) cubic foot per second (449 gallons per minute).

The NPDES permit monitoring frequency of twice per month for discharges at DMP 001 will continue. Review of Discharge Monitoring Reports (DMRs) for the term of the recent permit does not indicate any violations of effluent limitations. No violations of permit conditions have been issued during the recent permit term.

*Duncan Branch is not included on the state's 303(d) List of impaired streams nor is the stream designated high quality. The stream was once a free flowing stream full of aquatic life but the quarry operations severed the stream from its upper watershed and impeded its natural flow. Vulcan's quarry operations have resulted in stream impairment. Yet the stream is not listed as impaired for any of its classified uses. Why is this so?*

The Division of Water Pollution Control/Mining Section is requesting that Duncan Branch be placed on Tennessee's 303(d) List of impaired waters due to finding that the stream was only partially supporting. We also determined that the stream does not meet the criteria for high quality waters.

The applicant completed the required alternatives analysis for permit modification to increase the affected permit area.

*The company has appropriated the stream flow in Duncan Branch and used the flow for company purposes and profits.*

Available information indicates that quarrying activity intercepted flow in the upper watershed of Duncan Branch prior to the passage of *The Tennessee Water Quality Control Act* and the federal *Clean Water Act*.

*TDEC is responsible for water quality, water quantity, and ground water. Yet we were told several years ago that TDEC was only concerned with water quality, that water quantity is not important. Is this true? Is water quantity important?*

The department's regulatory authority comes from the laws passed by the legislature. The *Water Quality Control Act* does cover both surface and ground water. It does not directly address water quantity, but sometimes lack of quantity can create a quality problem. However, as noted above, the quarrying activity that intercepted the flow of Duncan Branch occurred before the Act became law. As a general matter, NPDES permits cover discharges to surface waters and are administered by the Division of Water Pollution Control.

## **B. Additional Administrative Items, Sinkhole Repair, and Stream Assessment**

*Vulcan Construction is using a foam like material to repair sinkholes. What is this material? Will the material cause water quality problems?*

This material is not being used for any activities directly covered under the NPDES permit. General ARAPs have been issued to property owners adjacent to the quarry for activities relating to sinkhole repair. The Material Safety Data Sheets (MSDS) for these products are contained in our mining ARAP files located at the letterhead address. These files are

available for public inspection during normal visiting hours by contacting [Tina.E.Jones@tn.gov](mailto:Tina.E.Jones@tn.gov) or telephone (865) 594-5616.

*TDEC's biological assessments of Duncan Branch indicated suboptimal conditions for aquatic life. What is TDEC doing to protect aquatic life in Duncan Branch?*

The antidegradation study conducted in November 2007 included a Macroinvertebrate stream survey. That survey demonstrated that Duncan Branch was partially supporting its classified uses.

The NPDES permit requires that stream flow in Duncan Branch be maintained and monitored on a daily basis. Stream flow maintenance will promote the biological integrity of this stream. Vulcan Construction Materials, LP, also is required by agreement with the City of Maryville to pump water into Duncan Branch that is of sufficient quantity to maintain existing aquatic life.

The permittee is required to discharge treated wastewater and stormwater in compliance with the terms and conditions of the NPDES permit. Discharges of treated wastewater and stormwater shall not result in harm or removal of aquatic species. The Division of Water Pollution Control/Mining Section is requesting that Duncan Branch be placed on Tennessee's 303(d) List of impaired waters due to finding that the stream was only partially supporting.

*Does TDEC have a mission statement? What is TDEC's purpose?*

Yes. TDEC's purpose and mission is to safeguard human health and the environment for all Tennesseans by protecting and improving the quality of our land, air, and water. The Statement of Purpose can be found at [www.state.tn.us/environment/ea](http://www.state.tn.us/environment/ea). See also *The Tennessee Water Quality Control Act of 1977, T.C.A. 69-3-102, Declaration of policy and purpose.*

*Blasting activity can cause sinkholes, disrupt ground water, and result in damage to residential dwellings and structures.*

Blasting activity is regulated by the Tennessee Department of Commerce and Insurance, Tennessee State Fire Marshal's Office, 500 James Robertson Parkway, 3<sup>rd</sup> Floor, Davy Crockett Tower, Nashville, TN 37243-1162; telephone (615) 741-7190. The East Regional Office is located at 531 Henley Street, Suite 719, Knoxville, TN 37902-2898, telephone (865) 594-6165.

*TDEC has the responsibility of balancing economic interests and environmental quality. Economic gain is the priority for the Vulcan quarry facility. TDEC needs to restore the balance and give equal status to environmental protection.*

The Division's responsibility is to evaluate the permit application to determine if the plans and specifications for drainage control and wastewater treatment meet NPDES program and state regulatory requirements for the protection of Tennessee's water quality

standards. The applicant submitted an evaluation of alternatives to discharge and has met the requirements for a complete application.

*The manager of the Knoxville Environmental Field Office was contacted about the Maryville Quarry and he responded that a revised permit was being prepared. A permit was not received and the manager was again contacted. He responded that a revised permit would be delivered by the field inspector. What happened? A revised permit was never received.*

An application for the renewal and modification of this NPDES permit was submitted in June 2007 but withdrawn by the company in November 2008. A scheduled public hearing was cancelled. Subsequently, a new application for permit renewal and modification was submitted in December 2008 and the public hearing was held on May 14, 2009. During this time frame, General ARAPs were issued and renewed to property owners for sinkhole repair.

Perhaps a misunderstanding followed as a result of the submittal and withdrawal of permit applications. Permits issued by the Division are mailed to the permittee. Interested citizens may request and receive copies of permits by mail and/or electronically.

The Division has reviewed the application and supporting plans, considered the oral and written testimony in the hearing record, and submitted questions for consideration by our Office of General Counsel. The public participation process involved the review of associated governmental agencies, including the Tennessee Wildlife Resources Agency, Tennessee Division of Natural Resources, and the U. S. Fish and Wildlife Service.

Based on our review, the Division has determined that the NPDES permit can be reissued. The application is complete and meets requirements of the NPDES program and *The Tennessee Water Quality Control Act of 1977*.

The permittee is required to discharge treated wastewater and stormwater in a manner such that pollution will not occur. Citizens can file complaints and request that corrective actions be taken. Permit compliance will be monitored and enforced by the Division.

Citizens have the right of third party appeal of permit decisions in accordance with the requirements of *The Tennessee Water Quality Control Act of 1977, TCA 69-3-105 (i)*.



Paul E. Davis, Director

11 - 6 - 2009  
Date