



February 13, 2003

Samuel Van Nest, Planning Board Chair
Hillsborough Township – Town Hall
379 South Branch Road
Hillsborough NJ 08844

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RE: 3M Quarry Stormwater Management Plans

Dear Mr. Van Nest:

The Stony Brook-Millstone Watershed Association has actively participated in the review process of the Stormwater Management Plans and NJPDES Permits for the 3M Quarry since 2000. This letter serves to summarize our involvement and our current recommendations. After careful review of the plans, and our recent site visit, we offer the following recommendations that we hope you consider, during your review of the 3M Stormwater Management Plans.

Recommendations

1. The majority of the quarry operations are located in Hillsborough Township, but much of the stormwater impacts occur in Montgomery. Therefore, it is critical that the two communities coordinate your actions. It would be helpful if Hillsborough would *Keep the Public Record Open* and not make any final decisions until after the hearings in Montgomery are held on Feb 24th, to ensure that concerns and impacts to downstream communities are incorporated into your decisions.
2. Overall our Watershed Association concurs with the revised 3M plans, and we are hopeful that these efforts when properly implemented will achieve a significant reduction in the turbidity currently impairing the streams in Hillsborough and Montgomery Townships.
3. The Watershed Association seeks support from Hillsborough to condition approval of these stormwater plans contingent upon 3M's commitment to perform routine monitoring for chemical and biological parameters as outlined below. The Stormwater Management practices proposed by 3M are designed for sediment, not the fine colloidal particles that are generated at the 3M quarry. Therefore, monitoring of the stormwater is essential to ensure these practices are being effective.

Many studies haven proven the correlation that excessive sediment deposition and turbid water can encase fish gills, eggs, larvae and reduce viability of many species. Therefore, the Watershed Association has suggested that 3M conduct monitoring for macro-invertebrates and

chemical analyses at the NJPDES sampling stations for the following parameters:

- ◆ A Biological Assessment of the macro-invertebrates should be conducted twice annually, in late spring and the fall, following the NJDEP methodology.
 - ◆ Chemical monitoring should include Total Suspended Solids, Total Dissolved Solids, Dissolved Oxygen, Nitrates, and fecal coliform, and should be conducted in accordance with the NJPDES permit.
 - ◆ In addition, monitoring for Total Suspended Solids should be conducted after significant storm events to confirm the effectiveness of the runoff controls. Samples for laboratory analyses should be collected within 24 hours after rain events for the 2-year storm or greater.
4. During our recent site visit to the quarry on February 3, 2003 it was observed that berms are constructed along the entire length of the operation roads. These berms contain mineral fines, are un-vegetated, and are also a major source of pollution to the streams. These berms should be removed and replaced with large rock (ballast size), available from the operations, to reduce the mineral fines that runoff to the streams.
 5. Citizens have identified significant Historic and Natural Features that are located on the 3M property in Hillsborough Township, including: Fort Hans, Roaring Rocks, and the Devil's Half Acre. These are important landmarks and Hillsborough Township should work with 3M to place preservation/conservation easements on these areas.

Background Information on the Quarry Practices and the Watershed Involvement

The 3M Company has operated the Belle Mead quarry since 1960, and the site includes approximately 1500 acres, located in Hillsborough and Montgomery Townships in Somerset County. Two hundred and fifty acres are involved in the active quarry and production operations for ceramic-coated granules for asphalt roofing products. The process includes: rock quarrying, crushing and screening (C&S), coloring, finishing, and shipping. From this operation, massive stockpiles of mineral fines (waste byproducts) are stored on site, which have become over 30 acres large and 80 feet high.

Impairments to water quality downstream, by milky-white turbid runoff from the quarry operations, continues to occur after significant storm events, particularly to Back Brook, Roaring Brook and Cruser Brook. NJDEP Water Quality Standards for Total Suspended Solids is 40 mg/L to ensure healthy stream conditions for aquatic life. However, samples collected by the Sourland Regional Council identified concentrations as high as 147 mg/L for Total Suspended Solids in Cruser Brook. The NJDEP has repeatedly issued Notices of Violation (NOV) for the continued impairments to these streams, and the 3M plant manager explained that these penalties have totaled \$100,000, during our recent site visit.

The Watershed Association has coordinated a volunteer stream monitoring station at Cruser Brook since July 2000. While most streams in our watershed run clear, 62% of the bi-monthly samples collected from Cruser Brook recorded turbid readings. It should

be noted that our field kits only measure turbidity, not total suspended solids, which require laboratory analyses.

The Watershed Association appreciates 3M's commitment to address the turbidity problems and implementing these stormwater controls. We would like to continue to work with 3M, the communities, and NJDEP on improving water quality in this watershed.

Thank you for this opportunity to comment on the proposed Stormwater Management plans. Please contact Chris Altomari or me at 609-737-3735, if you have any questions regarding the comments and recommendations provided in this letter.

Sincerely,

George Hawkins
Executive Director

cc: Brian McLendon, NJDEP - NJPDES Permit Mgr
Ernie Thurlow, Union-Somerset soil Conservation District
Jerry Haimowitz, Sourland Planning Council
Ms. Leigh Otterlei, 3M Plant Managers
Anthony Gwiazdowski, Hillsborough Mayor
Louise Wilson, Montgomery Mayor
Art Taylor, Hillsborough Planning Bd
Steven Sacks-Wilner, Montgomery Planning Bd