



January 6, 2003

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Montgomery Township Environmental Commission

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Montgomery Township Planning Board
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RE: 3M Belle Mead Quarry – Stormwater Management Plans

Dear Ms. Chess and Mr. Sacks-Wilner:

Thank you for this opportunity for the Stony Brook-Millstone Watershed Association to review and provide comments on the Stormwater Management Plans proposed by the 3M Belle Mead Quarry. We share your concerns to improve these stormwater controls in order to improve water quality in the streams in the Montgomery Township watersheds.

Overall we concur with the newly revised 3M plans, and are hopeful that these efforts when properly implemented will achieve a significant reduction in the turbidity currently impairing the streams in Montgomery.

The following items should be most effective in this effort:

- Additional drainage channels were included to control runoff from the stockpile areas.
- The six (6) stormwater basins were enlarged and deepened to retain the stormwater and allow suspended solids to settle out.
- The mapping provided topographic details, which was helpful in evaluating drainage concerns and reviewing projected slopes of the drainage channels.
- 3M proposed using tons of hay bales within the channels, which should provide a cost-effective method to reduce turbidity in the runoff.

Re-vegetation and Closure of the Mineral Fines Stockpiles

The plans indicate that the height of these stockpiles exceeds 80-100 feet, and the Watershed Association remains concerned that these piles will continue to impair downstream water quality until they are stabilized, vegetated and closed in a fashion similar to closing a landfill. I understand that Mr. Ernie Thurlow, an engineer with the Union-Somerset County Soil Conservation district is currently reviewing sediment control plans to close these stockpiles. His office has the experience and authority to regulate these issues, and we are confident in his oversight. However, a clear time frame should be specified and adhered to for completion of the

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plan and its implementation. These plans have been requested since 2001, and 3-6 month timeframe for complete plans does not seem unreasonable.

Many people have also suggested that these mineral fines could be re-used possibly by the cement or concrete industries. The NJDEP has a pollution prevention program and in compliance with the intent of this program 3M should provide documentation of their efforts to have these materials re-used.

Surface Water Monitoring

Two NJPDES monitoring stations were identified on the site maps, but information on the sampling parameters or frequency of sampling was not provided to SBMWA. The greatest impairment to water quality has been the suspended solids and its potential impact on water quality and stream life, such as macro-invertebrates. Many studies haven proven the correlation that excessive sedimentation can encase fish gills, eggs, larvae and reduce viability of many species. Therefore, 3M should conduct monitoring for macro- invertebrates and chemical analyses at the NJPDES sampling stations.

1. A Biological Assessment of the macro-invertebrates should be conducted twice annually, in late spring and the fall, following the NJDEP methodology.
2. Chemical monitoring should include TSS, TDS, turbidity, Dissolved Oxygen, Nitrates, and fecal coliform, and should be conducted in accordance with the NJPDES permit.
3. In addition, TSS monitoring 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.

Comments on the Stormwater Control Plans

1. The plans indicate that Basin 1 does not seem to have any controlled outflow channels. In previous conversations 3M officials stated that this basin was a major source of the turbidity reaching Roaring Brook. The plans do not provide recommendations to address this concern.
2. Maintenance on all the basins and channels will need to be implemented and documented to ensure their effectiveness.
3. Grades steeper than 3:1 are proposed to receive mulch at 2 tons/acre. Some drainage channels are very steep with slopes greater than 10% in some areas, and these areas are proposed to be stabilized with hay bales. These channels will need periodic maintenance to ensure that the bales are not dislodged during storm events, or clog drainage culverts or pipes. Routine replacement will also be necessary.

4. 3M may wish to consider whether the channels could be terraced with periodic 1-2 foot drops, instead of the long, steep slopes proposed for these channels, in order to reduce velocity of the runoff.
5. The Watershed Association would also encourage planting the retention basins with grasses as well as native wetland species to reduce TSS in runoff, provide habitat and biological diversity.

As stated before, the Watershed Association is glad that 3M has revised the plans, and is committed to address the turbidity problems and implementing these stormwater controls. We would like to continuing to work with 3M, the community, 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
Andrew Clark, NJDEP Wetlands Permit Mgr
Ali Chaudry, Industrial Discharge NJPDES Permit Renewal
Jerry Haimowitz, Sourland Planning Council
Frank Scarantino, Hillsborough Twp Dept of Health
Ms. Leigh Otterlei, 3M Plant Managers