ENGINEERING EFFORT REQUIRED FOR ATTAINMENT OF RUBBLE FILL PERMITS

Prepared for:

Honorable Chairman, Ronald A. Guns
Chairman of House Committee on
Environmental Matters

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(for Landfill)

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The current Maryland State and County Regulations for attainment of rubble fill permits are extremely stringent in nature. The following basic steps, with estimated time frames to complete, are necessary to obtain a rubble fill permit:

1. Phase I application - six to eight months
2. Phase II application - fifteen to eighteen months
3. Phase III application - six to twelve months
4. Public Hearing - about six months
5. Decision regarding permit issuance - about six months

To meet these requirements, a wide range of engineering expertise and state-of-the-art application are required. In addition to geologists and hydrogeologists, the professional civil engineering disciplines involved include:

1. Ground water modeling and monitoring
2. Geotechnical investigation and analysis
3. Hydrology and hydraulics
4. Site planning and design
5. Structural analysis and design
6. Land surveying

The engineering work to prepare the documents for the rubble fill permit is very extensive. An abbreviated summary of this work for each phase of the permit application is listed below:

A. **Phase I - Evaluation of possible impacts to the environment and public health**

The following list summarizes the work involved:

1. Preparation of site data including location, topographic and drainage data with accompanying maps; site and surrounding property land use.
2. Description of onsite soils, geology and hydrogeology.
3. Description of the proposed rubble fill including the area served, capacity and types of waste accepted at the rubble fill.

B. **Phase II - Rigorous investigation of site-specific geology and hydrogeology; conceptual plan for the rubble fill**

The following list summarizes the work involved:

1. On-site soil boring data with geotechnical description, evaluation, and mapping

2. Evaluation of possible impact to any 100-year floodplain

3. Evaluation of possible wetland impact and attainment of any required permits

4. Installation of groundwater monitoring wells and peizometers - **One year of data accumulation and evaluation of the ground water conditions is required**

5. In order to ensure that no adverse environmental or social impacts occur due to the rubble fill, the conceptual plan includes but is not limited to considerations regarding:

   a. Geographic, topographic, geotechnical, floodplain, surface runoff and ground water analysis

   b. Erosion and sediment control

   c. Provision of stormwater management control

   d. Provision of buffers from adjacent property

   e. Provision of site access which is compatible with existing traffic patterns

Has this been done? — not done in current Phase 2

C. **Phase III - Detailed engineering plans, operating plan and closure plan of the rubble fill**

The following list summarizes the work involved:

1. Detailed engineering design, including but not limited to:

   a. Grading and sediment control plan in a phased operation

   b. Drainage facilities

   c. Stormwater management facility for water quality and quantity control

   d. Access and haul roads

   e. Excavation and temporary stockpile areas

f. Plans for the fill operation, which indicate rubble placement, and cover procedures

g. Location of equipment and storage areas

2. Operating Plan, including but not limited to:

a. Schedule of operations

b. Operating procedures for placement and covering of rubble

c. Type of equipment

d. Work force

e. Fire protection

f. Noise control

g. Vector control

h. Dust control

i. Control of access and screening

3. **Ground water monitoring and contingency plan to provide measurements of ground water quality and to ensure that proper quality is maintained throughout the rubble fill operation.**

4. Closure Plan to ensure proper cover and vegetative stabilization at the finished grade of the rubble fill

The engineering effort involved to complete the requirements of Phases I thru III of the rubble fill permit application is very substantial. As previously mentioned, the current permitting process takes a long period of time. Engineering effort continues throughout this time. Engineers also take part in the public hearing and regulatory agency review process.