Draft Guidelines for Submitting Data for Model to be Completed by ODNR Division of Mineral Resource Management

This guideline intended is to assist in the submission of data to ODNR, Division of Mineral Resource Management that will allow the Division to complete a ground-water flow model. This guideline presents data formats and requirements for the information required by the Ohio Administrative Code 1501: 14-5-01 (A) and (B).

(A) A hydrologic map consisting of a single map using the most recent USGS 7.5 minute topographic maps at a scale of 1:24,000 as a base or other approved format…

- When submitting the hydrologic map, include the existing permitted area and the proposed permit area. Show the proposed and existing areas in different colors and/or patterns and clearly label each

- Include a depiction of the current quarry dimensions and the ultimate sump elevation, and a description of the history of mining at the quarry including start date and significant deepening and expansions and previous sump elevations.

- Include a unique identification number for each well depicted on the map. This number will be used in the EXCEL spreadsheet described later in this document.

- Locations of any well, well field, reservoir, river, water source used for a public water supply or facility registered under Section 1521.16 of the Ohio Revised Code on or within the hydrologic study area should be clearly identified on the

map using a different symbol or color than the domestic wells. These wells should be included in the spreadsheet. Information regarding the locations and withdrawal amounts can be obtained from ODNR's Division of Water, Water Withdrawal Facility Registration Program. The labels should correspond to the ODNR water withdrawal registration number. Also include the volume of water withdrawn from these sources, their location (X,Y coordinates), primary use type and defined by the ODNR Division of Water, on a seperate EXCEL spreadsheet. Columns in the water withdrawal spreadsheet should include registration number, year, source (surface water or ground water), total for year, and a column for each monthy total.

(B) *A hydrogeologic description in sufficient detail to determine the hydrologic cone of depression for the proposed operation.*

- Values of transmissivity, storativity, or hydraulic conductivity, must be provided on a table that contains references to the source of information and location of the test data. Be sure to state the units of the reported values.

- Provide an EXCEL spreadsheet that contains data from the well logs depicted on the map mentioned in section (A). If any of the information isn't available then leave that cell in the spreadsheet blank. Each row should contain data for a single well displayed on the map. Columns should include: the unique identification number, well log number, township, date drilled (include month/day/year), x-coordinate (specify coordinate system, zone, and NAD year), y-coordinate

(specify coordinate system, zone, and NAD year), surface elevation of well, total depth of well (in feet below land surface), depth to bedrock (feet), description of unconsolidated material (means the dominant lithology by thickness (e.g. clay, sand & gravel, silt, etc.)), static water level (feet), casing length (feet), lithology of screened or open borehole, length of screen (feet), test rate (in gallons per minute), duration of test (in hours), drawdown (feet).

- Cross sections must be at a horizontal scale of 1:24,000 and the vertical exageration must be identified. Cross sections must also show: the lateral and vertical variations in surficial and bedrock lithology, the locations of boreholes and wells used in their construction, static water levels, a depiction of the existing quarry and the proposed expanded quarry, and surficial and bedrock topography (possible sources: USGS topographic maps, ODNR, Division of Geological Survey bedrock topography maps, water well logs, theses, etc.).

Possible Sources of Information

This guideline is meant to serve as a starting point for finding some of the information required by the Ohio Administrative Code 1501: 14-5-01 (A) and (B) and is not intended to be a comprehensive listing of possible data sources.

The ODNR Division of Water has sources of information that are available to the public. Please consult with staff geologists about obtaining data. See library at ODNR Division of Water for select reports and theses on Ohio hydrology. ODNR also has test borings that may be useful in providing hydrologic information. County-wide ground water

resources maps and pollution potential maps are available for most counties from the Division of Water. The main contact number for the Division of Water is (614) 265-6717.

The ODNR Division of Geologic Survey has maps depicting the bedrock geology, drift thickness, and structure contours of geologic formation. These maps are available printed on base maps at a scale of 1:24,000. The Division of Geologic Survey also has measured stratigraphic sections from many areas of the state. Also, the Division has many geologic reports. Please consult with staff geologist for possible sources of information. The main contact number for the Division of Geological Survey is (614) 265-6576.

The US Geological Survey has publications from numerous studies conducted across Ohio that contain the required data.