Module 10: Operational Information [§§77.452/77.456/77.563/77.564]

10.1 Equipment and Operation Plan

For each phase of mining, identify the type and method of mining; engineering techniques; major equipment to be used; starting point; and the anticipated sequence in which the phases are to be mined.

There will be three phases of mining as shown on the Exhibit 9 Operations Map. Phases 1 and 2 are proposed to be bonded and activated for mining upon permit issuance. Phase 3 will be activated at a future date with bonding calculation update and permit revision provided at that time.

Phase 1 will contain the processing plant/pad and initial mineral extraction operations. Phase 1 includes all of the proposed disturbance to the west of the First Energy High Point-Rockwood 115kV transmission line and part of the area to the east of the High Point-Rockwood transmission line. Diversion ditch DD-1 will be installed during Phase 1. DD-1 will serve as the boundary between Phases 1 and 2. Mineral extraction may take place in any area within the bonded operational/mining area in Phase 1. Sediment pond SP-1 and associated ditches will be constructed prior to any earth disturbance in Phase 1. Before mining progresses past DD-1 and into Phase 2, sediment pond SP-2 and associated ditches will be constructed. Phase 2 consists of the remaining area to the east of the High Point-Rockwood transmission line, but west of the Lick Run-Rockwood transmission line. The only exception to this is that diversion ditch DD-3 will be constructed in Phase 2, which is to the east of the Lick Run-Rockwood transmission line. DD-3 is necessary in Phase 2 to limit the drainage area to SP-2. Phase 3 will include the remaining area to the east of the Lick Run-Rockwood transmission line. Before Phase 3 is activated, a bonding calculation update and permit revision will be necessary. Collection ditch CD-1B will be installed in Phase 3 to convey runoff to SP-1.

The type of mining proposed will be a surface mining block cut method. An existing small non-coal permit is active in the northern section of the proposed mining area in Phase 1. The small non-coal permit will be voided and bonds returned upon issuance and successful bonding of this LNC. Equipment utilized will be excavators, dozers, haul trucks, wheel loaders, and other typical surface mining equipment. A crushing plant will be utilized to reduce shot rock material into common aggregate sizes for sale to public markets. The first cut location for each proposed mining phase is shown on the Exhibit 9 Map. Topsoil and any other overburden will be stripped and stockpiled to be used during reclamation.

10.2 Pit Configuration

a) **Identify the maximum depth of mining and the elevation of the pit floor at the maximum depth of mining for each mining phase.**

The mining thickness will follow the sandstone thickness and may vary from 50' to 70'. The sandstone dips gently to the northwest and outcrops on three sides of the property. Electric utility lines bisect the site and prevent full seam extraction in certain areas. The pit floor will be elevated considering adjoining streams and the approximate lowest elevation will be 1990' in Phase 1 and 2010' in Phase 2.

b) **If mining consolidated rock, identify the maximum highwall height and the benching interval to include the distance between the benches measured vertically (i.e. height of the working face of the bench) and the width of the benches.**

The sandstone is consolidated and a maximum highwall height is approximately 70'. Typical mining will extract full column in one highwall with adequate layback. This may average 65' or less and can be safely completed due to the competent rock unit and lack of overlying overburden.

c) **If mining consolidated rock and the reclamation plan is an alternative to approximate original contour involving restoration of the pit floor and final working face, identify the total acreage of pit floor and final graded slopes.**

The reclamation plan will be an alternative to approximate original contour due to leaving material in place in the area of the existing electric lines. To reclaim the site, the highwalls will be blasted or backfilled and sloped at no greater than 35° down to the pit floor. The pit floor will be backfilled only in areas where it is necessary to establish positive drainage. The total acreage of pit floor and final graded slopes will be 73.1 acres for all Phases 1 and 2.

10.3 Existing Structures

Identify and describe the intended use of all existing structures or facilities to be used in connection with or to facilitate mineral removal activities. (Common existing structures include impoundments, stream crossing facilities, water obstructions and processing waste dams.)

An existing small non-coal permit (#56190801) will be encompassed by this new permit. The small non-coal will be terminated after new permit issuance. A common use road exists that will be used to allow access to this mine. The same access route will be used that is currently in operation for the small non-coal.

10.4 Overburden Piles

Provide a narrative plan for reclamation of overburden piles specifying the timing and extent of overburden piles returned to the pit and final grading of the overburden pile areas for blending into existing contours.

Overburden material is limited for this mining operation. Topsoil and any organic materials will be segregated upon starting each cut and temporarily stockpiled adjacent to the mining areas. Any other overburden, if present, will be stockpiled in a separate pile adjacent to the mining areas. All overburden will be returned to the pit and sloped to final grade as mining progresses. After sloping and reclamation grading is completed, the final topsoil may be applied.

10.5 Final Grade and Drainage

Identify the final grading and drainage pattern, including topographic contours on Exhibit 18 and a description of compaction and stabilization techniques. Provide cross-sections or a contour map showing permit line setback(s), final postmining slopes, postmining watertable and safety benches.

See Exhibit 18 for post-mining grades. Drainage patterns will generally follow pre-mining patterns with small changes required to properly tie in reclamation slopes. Utility lines will also create elevated portions of existing grade, that will not be lowered. Post-mining grades in the mining area will closely follow sandstone natural dip direction. The electric utility line corridor will prevent drainage continuity between the east and west sides of the property. The existing drainage pattern follows an elevated ridge near the central areas of the site, therefore no major changes to drainage will occur post-mining. See the Exhibit 7.1C Geologic Cross-Sections identifying the approximate proposed mining and reclamation slopes.

10.6 Reclamation Timetable

Provide a sequence of operations for the accomplishment of major stages in the reclamation plan demonstrating compliance with the concurrent reclamation requirements in 25 Pa Code 77.595. Include an estimated timetable for reclamation which is tied to the mining phases and the termination of mineral extraction.

Reclamation will be completed as mining progresses. In general, reclamation will consist of blasting or backfilling the highwall and returning any overburden to the pit to slope it to tie to the pit floor at no greater than 35°. Then, topsoil will be spread and the seed mixture will be applied. Due to the limited nature of the work required for reclamation and to allow for flexibility during mining, the maximum allowable un-reclaimed pit size will be two full rows of cuts or approximately 1,315 feet by 625 feet. Once the pit(s) reach this size, reclamation activities must be completed for a portion of the pit before mining advances any further.

10.7 Identification of Toxic Materials

When applicable (e.g., noncoal operation in coal measures) provide a detailed description of the methods used in the identification of potentially acid and toxic forming materials (boney, rooster, blossom or other inferior coal and noncoal strata) which will be encountered and separately handled. Correlate and identify these strata in the test hole data.

N/A. There will not be any potentially acidic material encountered in the mining area.
Below the sandstone, siltstone and shale material will be exposed as the pit floor. These materials have low sulfur content as per the acid base accounting overburden analysis (see Module 7.5). As a best management practice, 400 ton/acre of 100% calcium carbonate fines will be placed on the pit floor with topsoil material placed directly on top. Areas along final highwalls will also have 400 ton/acre on the pit floor with subsoils placed on top followed by topsoil on the final surface.

10.8 Special Handling of Toxic Material

When applicable (e.g. noncoal operation in coal measures) provide a detailed description of the methods to be used in the separation and handling of acid and toxic forming materials. Include transportation, storage, treatment and return of the material to the backfill. Identify the amount and source of clean fill to be placed above and below the material and the compaction and other methods to preclude combustion of the material and prevent groundwater contamination. Indicate all disposal areas on Exhibits 9 and 18.

N/A – no special handling is proposed because no coal or special handling material will be encountered.

10.9 Oil and Gas Wells

Where mining activities are proposed to be conducted within 125 feet of any oil or gas well, identify the location on Exhibits 6, 9 and 18 and provide a description of the activity. Provide a demonstration that the well has been sealed; or describe the measures to be taken to ensure the integrity of the well, access to the well at all times and the well operator's consent to the proposed activity.

N/A – no known oil or gas wells exist within 125 feet of the permit area.

10.10 Wells, Exploration Holes and Bore Holes

Identify the type and location of wells, exploration holes, bore holes and monitoring wells and provide a description of the manner in which each will be cased, sealed or otherwise managed.

Eight exploration holes were utilized to develop this permit. Drill holes were sealed after completion and the mining plan will further remove all locations where exploration testing occurred.

10.11 Underground Mines

Where proposed surface mining activities will be conducted within 500 feet of any point of either an active or abandoned underground mine (coal or noncoal), provide a description of the nature, timing, and sequence of the operation. Identify the location of each underground mine opening and the manner in which the opening will be sealed or otherwise managed including appropriate cross sections and design specifications for mine seals. Provide a description of the potential hydrologic impacts of the proposed activities, the effects on the existing groundwater system, and the effect the proposed activities will have upon abatement of pollution or the elimination of hazards to the health and safety of the public.

Surface mining will occur over abandoned Lower Kittanning coal underground mines. Due to the large vertical distance separating the abandoned underground mine from the surface, no subsidence potential is foreseen. The surface mining will be approximately 110 feet above the Lower Kittanning coal deep mines.

10.12 Public Highways

Where opening or expansion of pits are proposed within 100 feet of the outside right-of-way of a public highway, or a relocation of a public highway is proposed, identify the name and section of the public highway involved, a description of the activities to be conducted and detailed plans and cross-sections of the proposed activities. Include the written approval of the government agency having jurisdiction over the highway.

(*Note*: If the initial public notice advertisement does not contain a notice of the variance request, attach the proof of publication for advertisement of the variance.)

N/A – no mining is proposed within 100' of a public road right of way.

10.13 Public Parks and Historic Places

Where the proposed mining activities may affect any public park or historic place, provide a demonstration of the measures which will be taken to minimize or prevent adverse impacts.

N/A – mining activities will not affect public parks or historic places.

10.14 Utilities

Where the proposed mining activities may adversely affect services provided by oil, gas, and water wells; oil and gas pipelines; railroads; utility lines; and water and sewage lines, provide a demonstration of the measures which will be taken to minimize or prevent these impacts.

Mining activities will occur adjacent to electric powerlines and a CNX gas pipeline. The gas pipeline is 6" and reported as "abandoned" from the CNX staff. Apart from surface crossings, mining activities will not occur within the assumed 50' right of way. A crossing agreement for access and ditch crossings is provided. Blasting will occur within 200' of the gas line, but not within the assumed right-of-way. A notification letter has been sent to CNX to comply with TGD 562-2112-503. No mining is proposed under the electric utility lines. A haul truck crossing will be used to convey material under electric power lines. Adequate setbacks to ensure stability of the power poles and utility corridors will be utilized and field conditions may warrant larger setbacks than what is shown on the Exhibit 9.

10.15 Bonding Calculations

Attach a completed Bond Calculation Summary-Noncoal for consolidated (5600-FM-BMP0474) or unconsolidated (5600-FM-BMP0473) material (sand, gravel, shale, soil). Complete a Bonding Increment Application and Authorization To Conduct Noncoal Mining Activities (5600-FM-BMP0304).

See attached.

5600-FM-BMP0474 12/2013

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF MINING PROGRAMS

BOND CALCULATION SUMMARY-NONCOAL CONSOLIDATED

Permittee: Rockwood Stone, LLC.		Date: 1.2025
Permit #: New	Mine Name: Rockwood Quarry	
Municipality: Black Township		County: Somerset

Operation (see attached calculations)	Quantity	Units	Rate $/Unit	Bond Amount
Mining Area (i.e. minor grading/vegetation)	73.1	Acres	3,500	255,850
Support Area (revegetation)	28.5	Acres	1,830	52,155
Spoil Storage/Earthmoving	210,000	Cubic yards	1.05	220,500
Highwall Blasting				
Up to 20 ft Height		Linear foot		
>20 up to 30 Height		Linear foot		
>30 up to 40 Height	3,400	Linear foot	40	136,000
>40 up to 50 Height		Linear foot		
>50 Height		Linear foot		
Mine Sealing		Calculation		
Ponds	2	No of Ponds	3,800	7,600
Demolition of Structures	Calculation	Calculation	Costworks	21,198.40
Large Tires	0	Each		
Other Costs				
Mobilization/Demobilization	Lump Sum	Calculation		27,732.14
Total Reclamation Cost				$721,035.54

Noncoal Bond Rate Guidelines 2025

Project Name:	Rockwood Quarry
Operator:	Rockwood Stone, LLC.
Municipality:	Black Township
County:	Somerset

1.2025

Unit Operation	Unit Measure	Unit Costs ($)	If Applies to Permit Mark with " X "	Amount of Units	Total ($)
Mining Area	acre	3,500.00	x	73.1	**255,850.00**
Support Area	acre	1,830.00	x	28.5	**52,155.00**
Grading	cubic yard	1.05	x	210,000	**220,500.00**
Highwall Blasting	linear foot	40.00		3,400	**136,000.00**
Pond Removal	pond	3,800.00	x	2	**7,600.00**
Structure Demolition	Costs for structure demolition will be calculated using costs listed in the construction industry's latest annual cost publications, such as the *Means Building Construction Cost Data* publication.	2024 CostWorks	x	21,198.40	**21,198.40**
				Subtotal	**693,303.40**

Special Condition	Unit Measure	Unit Costs ($)	If Applies to Permit Mark with "X"	Amount of Units	Total ($)
Mobilization/Demobilization	4% of subtotal or maximum of $40,000.00	0.04	x	693,303.40	**27,732.14**
				Subtotal	**27,732.14**

Conventional Bond Total Required	**$721,035.54**

CONVENTIONAL BOND CALCULATIONS

OPERATION	EXPLANATION FOR CALCULATIONS
Mining Area:	73.1 acres
Support Area:	28.5 acres to be revegetated
Grading:	Pit to be backfilled with 210,000 CY of material; *see Bond Attachment A*
Pond:	2 ponds to be removed
Mobilization/Demobilization:	4% of direct costs or $40,000 maximum
Other:	Structure Demolition Details: **Total from below: $21,198.40**
	The 2024 edition of Means Building Construction Cost Data publication was used in order to determine the structure demolition figure:
	Conveyor Demolition: Conveyor Belt = 2,850 total feet Steel Frame Structure Demolition: *Labor Foreman* $75.51/hr @ 40 hrs = $3,020.40/wk and *Laborers (4)* $72.55/hr each @ 40 hrs = $11,608.00/wk; $3,020.40 + $11,608.00 = Total $14,628.40; *reference CSI #024116130020 crew info.* Front-End Loader: (95 h.p.) for 5 days @ $735.00/day = $3,675.00; *reference #015433204620* **Total Conveyor Cost:** $14,628.40 + $3,675.00 = **$18,303.40**
	Scale Demolition: Steel Frame Structure Demolition: 70' x 10' x 1'; $0.50/c.f. = $350.00; *reference #024116130020* Concrete Footer Ramps: 10' x 10' x 1 1/2'; $0.70/c.f. = $105.00; *reference #024116130050* **Total Scale Demolition:** $350.00 + $105.00 = **$455.00**
	Removal Costs for Mobile Items: **Total = $800.00** Scale House $800.00/item for removal off of the site
	Plant Demolition Items: Jaw Crusher (1), Secondary Crusher (1), Screendecks, and other processing equipment. *reference CSI #050505100270* **Total Demolition Items:** $410.00 x 4 demolition items = **$1,640.00**