

CONSTRUCTION ITEM	ESTIMATED CONSTRUCTION QUANTITIES			
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	STAGE I (1 MONTH)	STAGE II (4 MONTHS)	STAGE III (4 YEARS)	STAGE IV (15 YEARS)
COMBINED COAL REFUSE DISPOSAL, CUBIC YARDS	8,300 (10,400 TONS)	68,000 (85,400 TONS)	835,000 (1,048,000 TONS)	3,000,000 (3,800,000 TONS)
SURFACE DRAINAGE				
EXISTING DIVERSION DITCH, D1, MODIFICATION	825 FEET	-	-	-
RIPRAP	1,250 TONS	-	-	-
GROUT	363 YD ³	-	-	-
DIVERSION DITCH, D2, EXTENSION, GRASS LINED	1,500 FEET	-	-	-
EXCAVATION	31,000 YD ³	-	-	-
TEMPORARY DIVERSION DITCH, D3, GRASS LINED	AS REQUIRED	AS REQUIRED	AS REQUIRED	AS REQUIRED
PERIMETER DITCH, P1	700 FEET	-	-	-
3" TO 9" ϕ RIPRAP	875 TONS	-	-	-
GROUT	250 YD ³	-	-	-
PERIMETER DITCH, P2	-	-	600 FEET	100 FEET
3" TO 9" ϕ RIPRAP	-	-	750 TONS	125 TONS
GROUT	-	-	216 YD ³	36 YD ³
PERIMETER DITCH, P3	550 FEET	260 FEET	380 FEET	615 FEET
3" TO 9" ϕ RIPRAP	690 TONS	325 TONS	475 TONS	770 TONS
GROUT	200 YD ³	95 YD ³	140 YD ³	220 YD ³
PERIMETER DITCH, P4	-	-	-	550 FEET
3" TO 9" ϕ RIPRAP	-	-	-	825 TONS
GROUT	-	-	-	242 YD ³
(3) STILL AREAS (12" TO 24" ϕ BOULDERS)	700 YD ³	-	-	-
24" ϕ CMP	50 FEET	-	-	-
SUBSURFACE DRAINAGE				
MAIN ROCK UNDERDRAIN	-	-	550 FEET	500 FEET
3" TO 6" ϕ SANDSTONE COBBLES	-	-	330 TONS	300 TONS
FILTER CLOTH (5.2 YARD WIDTH)	-	-	8,600 SQ. FEET	7,800 SQ. FEET
INTERNAL ROCK UNDERDRAIN	-	-	2,150 FEET	4,225 FEET
3" TO 6" ϕ SANDSTONE COBBLES	-	-	1,400 TONS	2,800 TONS
FILTER CLOTH (5.2 YARD WIDTH)	-	-	33,500 SQ. FEET	66,000 SQ. FEET
SEDIMENT POND ON CREST				
12" ϕ CMP [(1) 90 DEGREE ELBOW]	60 FEET	USE FROM STAGE I	USE FROM STAGE II	USE FROM STAGE III
HAUL ROAD				
CULVERTS, 18" ϕ CMP	-	-	-	(2) 50 FEET
PIEZOMETER EXTENSION	-	-	(2) 50 FEET	-
SURVEY MONUMENTS	-	-	1	2

- NOTES
1. QUANTITIES ASSUME NO EXPOSED BEDROCK FOR DIVERSION DITCH, D-1.

2. EROSION PROTECTION - BETHLEHEM HAS THE OPTION TO USE AN 18" LAYER OF 3" TO 9" ϕ GROUTED RIPRAP OR A 30" LAYER OF 12" TO 24" ϕ BOULDERS FOR DITCHES WITH HIGH VELOCITIES.

DRAWING NO.

B77-80I-EI7

SHEET NO.

12 of 12

FIGURE NO.

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CONSTRUCTION QUANTITIES

COAL REFUSE DISPOSAL FACILITY

MINE NO. 81

BETHLEHEM MINES CORPORATION

DRENNEN, WEST VIRGINIA

PREPARED FOR

BETHLEHEM MINES CORPORATION

NICHOLAS DIVISION

CHARLESTON, WEST VIRGINIA

D'APPOLONIA

REVISION
△ REVISED SURFACE DRAINAGE DITCH LENGTHS AND QUANTITIES, AND ADDED PERIMETER DITCH P-4.