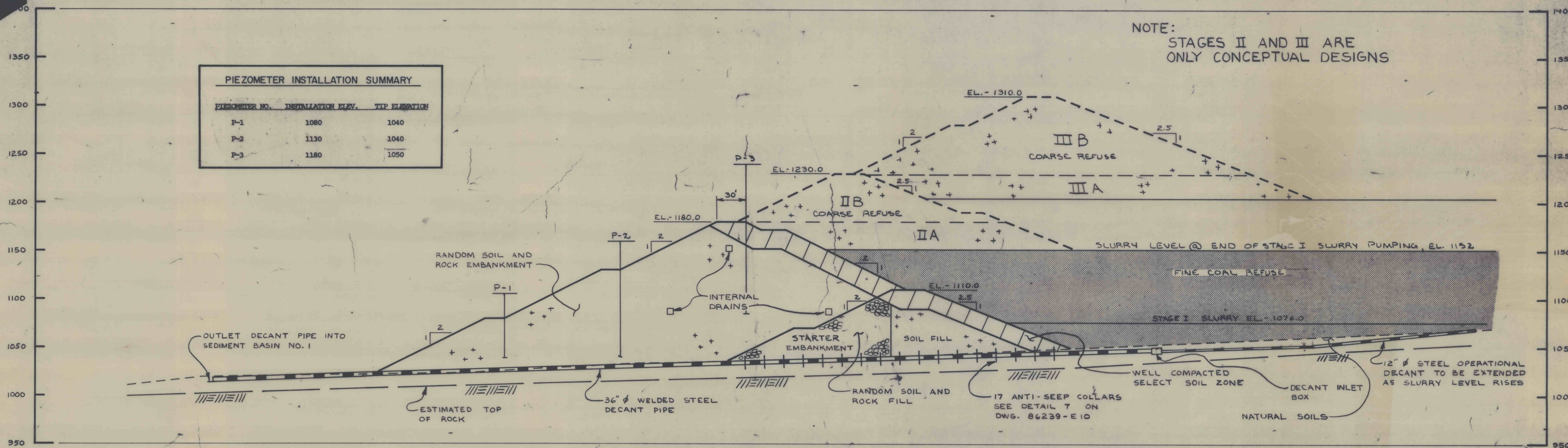




GENERALIZED SECTION THROUGH THE IMPOUNDMENT

SCALE: 1" = 50'

50 0 50 100 FEET

SUMMARY OF IMPOUNDMENT STAGING

Stage	Stage Crest (Elev.)	Estimated Time to Construct		Embankment Volume (1) 10 ⁶ CF	Slurry		Design Storm			Available Storage 10 ⁶ CF	Method of Storm Control
		Incremental (yrs.)	Cumulative (yrs.)		Volume (2) 10 ⁶ CF	Crest (Ft.)	Type	Volume 10 ⁶ CF	Crest (Elev.)	Freeboard (Ft.)	
Starter	1110	0.17	0.17	99,700 cy	—	—	OPP	11.1	1105	5	36 in. diameter welded steel decant
Stage I	1180	0.58	0.75	428,600 cy	2.61	1076	PMP	62.2	1160.0	20	12 in. diameter operational decant
Slurry Pumping Phase	1180	11.57(3)	12.32	—	52.06	1152	PMP	143.6	1177.0 (Max.)	3.0 (Min.)	12 in. diameter operational decant and PMP emergency spillway at Elev. 1161.5
(STAGES II AND III ARE CONCEPTUAL DESIGN ONLY)											
Stage IIA	1180	0.19	12.51	3.09	0.85	1153.0	PMP	143.6	1177.0 (Max.)	3.0 (Min.)	Emergency spillway at Elev. 1161.5
Stage IIB (including spillway notch closure)	1230	0.33	12.84	5.34	1.47	1154.0	PMP	143.6	1227 (Max.)	3.0 (Min.)	PMP emergency spillway at Elev. 1211.5 NOTE: Spillway at Elev. 1211.5 must be operational prior to filling to notch of Stage I spillway
Total Refuse Pumping Phase	1230	4.0	16.84	Total Refuse Volume (4): 85.2	—	1205.0	PMP	143.6	1227 (Max.)	3.0 (Min.)	Emergency spillway at Elev. 1211.5
Stage IIIA	1230	0.47	17.31	7.68	2.12	1206	PMP	143.6	1227 (Max.)	3.0 (Min.)	Emergency spillway at Elev. 1211.5
Stage IIIB (including spillway notch closure)	1310	1.01	18.32	16.45	4.55	1208	PMP	143.6	1227 (Max.)	3.0 (Min.)	PMP storm stored
Total Refuse Pumping Phase	1310	11.67	30.0	Total Refuse Volume: 242.7	—	1291.5	PMP	143.6	1307.0 (Max.)	3.0 (Min.)	PMP storm stored for approximately 8.5 years. NOTE: PMP Emergency Spillway at Elev. 1291.5 must be operational when slurry level reaches approximate Elev. 1242.

- (1) The Starter and Stage I embankments are to be constructed of strip mine spoil and spillway excavation materials.
- (2) The estimated slurry production rate is 4.5×10^6 cu. ft./yr.
- (3) The estimated coarse refuse production rate is 16.3×10^6 cu. ft./yr.
- (4) Cumulative years includes 12.3 MCF of storage added to the impoundment due to mining of the Lower Hernshaw Seam. (Starter and Stage I embankment volume less spillway excavation volume)
- (5) The estimated total refuse production rate is 20.8×10^6 cu. ft./yr.

SRW ASSOCIATES INC.

SCALE: AS NOTED	APPROVED BY: <i>[Signature]</i>	DRAWN BY: D. BRENT
DATE: AUG. 14, 1986	CHECKED BY: <i>[Signature]</i>	
BETHENERGY MINES CORPORATION WEST VIRGINIA DIVISION BROWN'S BRANCH IMPOUNDMENT BOONE COUNTY, WEST VIRGINIA		
GENERALIZED SECTION THROUGH THE IMPOUNDMENT		SHEET NUMBER 9 of 17 DRAWING NUMBER 86239 - E.9