

Applicant: <u>RAC Mining, LLC.</u> Mine Name: <u>Powhatan Mine No. 2</u> Permit Number: <u>P-3933 Revision R-2</u>
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Part III - Operation Plan

A. General Operation Information

1. Describe the type and method of coal mining procedures and major equipment to be used. (780.11)

See Attachment III-A-1

Major equipment to be used includes but may not be limited to:

- Backhoes
- Off Road Haulers
- Loaders
- Drills
- Service Trucks
- Dozers
- Track Backhoes
- Bulk Anfo Trucks
- Auger

2. Describe the sequence and timing of increments to be mined (as shown on permit map) over the total life of the permit. (780.11)

The timing increments are as follows:

<u>Inc. No.</u>	<u>Acres</u>	<u>From</u>	<u>Estimate Life</u>
1	51	Active Mining Increment	12 Months
2	87	In conjunction with Increment #1	12 Months
3	71	End of Increment #1	12 Months
4	81	End of Increment #3	12 Months
5	15	Issuance of R-2	End of Permit

The sequence of mining operations will be generally as follows:

- 1) Construction of Sediment Control Structures
- 2) Clearing and Grubbing
- 3) Topsoil Removal (if required)
- 4) Overburden Drilling and Blasting
- 5) Overburden Removal
- 6) Coal Recovery
- 7) Re-Grading
- 8) Revegetation

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ATTACHMENT III-A-1

ADDENDUM TO THE TYPE AND METHOD OF COAL MINING PROCEDURES

The operations plan is modified so that the mining operations may be occurring simultaneously on the Mary Lee and Blue Creek seams in the same cut as well as other cuts. Before the mining operation is completed in one cut, mining may commence in the next cut so that mining may be carried out in a continuous method. Different phases of the mining operation may be conducted in as many as four cuts at once. Clearing may be conducted in one cut. Drilling may be conducted in a second cut. Blasting and overburden removal may be conducted in a third cut. Interburden removal between the Mary Lee and the Blue Creek seams with coal removal may be conducted in a fourth cut. Various combinations of these steps will be occurring simultaneously in multiple cuts.

Mining at the Powhatan Mine No. 2 is progressing to the North with the current highwall near Basin 016E with cuts lying Southwest to Northeast as shown on the operations map. Spoil material from the current pit will be spoiled within the previously mined areas and subsequent pits. Mining will continue in this manner until the limits of Increment No. 1 are reached and mining then will progress into Increments No. 2 and No.3 upon submittal of Bond and Acreage fees. If surface mining becomes uneconomical to continue the last open cut will be utilized to auger mine the Blue Creek Seam only, as previously approved in the original permit prior to reclamation of the final highwall.

Mining at the Powhatan Mine No. 2 Increment No. 2 will begin just East of Basin 012BE as a continuation of mining from P-3868 to this increment, see attachment III-A-1(INC 2) at Location #1 with cuts lying West to East and then turning North to South and progress to the East until reaching the East Boundary of Increment No. 2 then turning the cuts Southwest to Northeast progressing to the Northwest along the East Boundary of Increment No. 2. At the same time mining begins in Increment No. 2 a second location (Location #2) of operations will begin at the Northeast corner of Increment No. 2 with cuts lying Southwest to Northeast and progressing to the Southeast with the intent to meet the cuts progressing from the Southeast corner of Increment No. 2. Locations #3 and #4 which lie North and West of Basin 012BE will have cuts lying West to East and progressing to the Northwest simultaneously with all other cuts within Increment No. 2. This plan can have mining activity in as many as four locations simultaneously. Excavated material from Increment No. 2 cuts along the South Boundary will be

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placed within the adjacent previously mined area blending the new mine spoil with the old mine spoil in order to reach A.O.C. and within the last open cuts of Increment No. 1. Spoil material from the current pit will be spoiled within the previously mined areas and subsequent pits. This will be a continuous mining operation and contemporaneous reclamation will not be interrupted. A revision for permit P-3868 has been approved to provide for material from the initial cuts of Powhatan Mine No. 2 Increment No. 2 to be placed within the final cut of Increment no. 4 for permit P-3868.

Mining within Increment No.3 will be a continuation of mining operations from Increment No. 1. Mining will commence on the south side of the Increment No. 3 boundary and progress to the north side of Increment No. 3 as shown on Attachment III-A-1 (INC 3). The operations will be located in two locations (Locations #1 and #2) with the cuts lying West to East and progressing North in the vicinity of the arrows along the South Boundary of Increment No. 2. Spoil material from the first pits will be spoiled within the open pit of Increment No. 1 and subsequent open pits. Mining will continue in this manner until the limits of the south area of Increment No. 3 are reached. Cuts will then begin on the East and West sides of Basin 005P (Locations #3 and #4) and progress to the Northeast. Spoil material from the area East and Northeast of Basin 005P will be transported to the final cut area along the North Boundary of Increment No. 3 due East of Basin 005P for highwall reclamation and also in subsequent open pits. The first cut West of Basin 005P, at location #4, will place the spoil in pre-law previously mined area, within the permit, and then in the previous cut and subsequent cuts thereafter blending the new mine spoil with the old mine spoil in order to reach A.O.C. within the permit boundary. This plan can have mining activity in as many as four locations simultaneously as shown by the four mining locations areas as shown on Attachment III-A-1(INC 3). If surface mining becomes uneconomical to continue the last open cut will be utilized to auger mine the Blue Creek Seam only, as previously approved in the original permit prior to reclamation of the final highwall.

Mining within Increment No.4 will be a continuation of mining operations from Increment No. 3. Mining will commence at the Southeast corner of Increment No. 4 just West of Basin 005P at Location #1 with cuts lying Southwest to Northeast and progressing to the Northwest, see Attachment III-A-1 (INC 4). Spoil from the first cut will be placed in the previous cut of Increment No.3 and previously mined area. Then the cuts will turn Northwest to Southeast progressing to the Northeast until they

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reach the North boundary of Increment No. 4. Spoil will be placed in the previous cut and subsequent cuts. Cuts will also begin Northeast of Basin 017P (Locations #2 and #3) and Northwest of Basin 017P (Location #4) simultaneously with cuts lying Northwest to Southeast and progressing to the Northeast until they reach the Northern boundary of Increment No. 4 as shown on Attachment III-A-1 (INC 4). Spoil material will be placed in the previous cut and subsequent cuts thereafter blending the new mine spoil with the old mine spoil in order to reach A.O.C. within the permit boundary. The operations will be located in four locations along the East Boundary, Northeast of Basin 017P and along the West boundary of Increment No. 4. The first cut West of Basin 017P and Northeast of 017P will place the spoil in pre-law previously mined area, within the permit, and then in the previous cut and subsequent cuts thereafter blending the new mine spoil with the old mine spoil in order to reach A.O.C. within the permit boundary. This plan can have mining activity in as many as four locations simultaneously as shown by the four mining progress arrows on the operations map. If surface mining becomes uneconomical to continue the last open cut will be utilized to auger mine the Blue Creek Seam only, as previously approved in the original permit prior to reclamation of the final highwall.

Basins 004P, 005P and 017P within the permit boundary of the area added to Powhatan Mine No. 2 are proposed. Basins 012E, 012AE and 012BE are existing and modification plans are required and submitted with this revision. Basin 012E and 012AE is a existing basins permitted and bonded under permit P-3868. If during the term of the permit basins require modifications, modification plans will be submitted to the Regulatory Authority for approval prior to any modifications. Upon modifying the basin, the basin will be certified to the Regulatory Authority.

The area added to Increment No. 2 will be mined using basins 012E, 012AE and 012BE. Within 60 days of issuance of this revision basins 012AE and 012BE it will be modified and certified to the Regulatory Authority.

The area added to Increment No. 3 will be mined using basins 004P. Prior to beginning disturbance in the drainage area for basin 004P it will be constructed and certified to the Regulatory Authority.

Basin 004P will be mined through and reconstructed in spoil. The embankment and discharge structures will not

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be disturbed, but only the interior of the basin. The area of the interior of the basin which comes into contact with the spoil material will be lined with 1.0 feet (minimum) of clay material with a permeability no greater than 1×10^{-6} cm/sec up to the maximum water elevation to minimize infiltration and to provide a stable pool level. The material will be placed in horizontal lifts not to exceed 6 inches and compacted to 95% of the standard proctor. During the mining through process runoff will be pumped to Basin 016E to maintain control of the runoff. After mining has progressed two cuts past Basin 004 normal pool area Basin 004P will be reconstructed and certified to the Regulatory Authority.

The area added to Increment No. 4 will be mined using basins 017P. Prior to beginning disturbance in the drainage area for basin 017P it will be constructed and certified to the Regulatory Authority.

See Attachment III-A.-1, Operation Map, for cut sequence layout.

See Attachment III-A.-1 (INC), Operation Map, for cut sequence layout and spoil placement.

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- (b) If an existing structure requires modification or reconstruction to meet the performance standards, attach a compliance plan which includes design specifications, construction schedule, monitoring procedures, and evidence that the risk of harm to the environment or public health or safety is not significant during modification or reconstruction.
None.

2. Ponds, impoundments, banks, dams and embankments. (780.25)

- (a) Submit a general plan which complies with Section 780.25(a)(1) for each proposed sedimentation pond, water impoundment, and coal processing waste bank, dam or embankment to be located within the proposed permit area.
See attachment III-B.-2.A

- (b) Submit detailed design plans which comply with Sections 780.25(a)(2 and 3) and 816.46 for each sedimentation pond to be constructed on the increment you currently propose to mine. If the sediment pond is to remain as a permanent water impoundment, design plans shall also comply with Section 816.49.
See attachment III-B.-2.A

- ©) Submit detailed design plans which comply with Sections 780.25(a)(2 and 3) and 816.49 for each temporary or permanent water impoundment to be constructed on the increment you currently propose to mine.
See attachment III-B.-2.A

- (d) Submit detailed design plans which comply with Sections 780.25(a) (2 and 3) and 816.81-816.85 for each coal processing waste bank to be constructed on the increment you currently propose to mine.
None proposed.

- (e) Submit detailed design plans which comply with Sections 780.25(a)(2 and 3) and 816.91-816.93 for each coal processing waste dam and embankment to be constructed on the increment which you currently propose to mine.
None proposed.

3. Diversions. (780.29,816.43, 816.44)

Are diversions of overland flow or stream channel diversions proposed?

(X) Yes () No

If yes, complete the following:

- (a) Is the diversion to be permanent?
(X) Yes () No

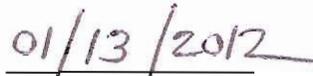
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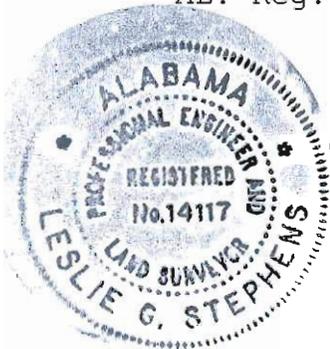
Attachment III-B-2(a)

CERTIFICATION STATEMENT:

I hereby certify that Attachment III-B.-2.A prepared for RAC Mining, LLC.'s Powhatan Mine No. 2, P-3933, Revision R-2 is in accordance with the Regulations of the Alabama Surface Mining Commission as adopted by Act 81-435 of December 18, 1981 and amended to date, and are true and correct to the best of my knowledge and belief.


Leslie G. Stephens, P.L.S. & P.E.
AL. Reg. #14117-E


Date



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Attachment III-B-2(a)

ADDENDUM TO THE GENERAL PLAN

The addendum to the general plan consists of the re-evaluation and modification of Basins 012E, 012AE and 012BE due to the addition of mining area.

Modifications to Basins 012E, 012AE and 012BE consist of the following:

- Basin 012E will not require modification. See the SedCad 4.0 re-evaluation runs within the detailed design plans of 012E, 012AE and 012BE.
- Modifications to Basin 012AE will include raising the concrete sideslopes of the primary spillway 0.1 feet and raising the top of dam 0.1 feet. However, from the field survey conducted on 7/16/2011, the top of the concrete sideslopes were measured at elevation 303.95 which is greater than the required modification elevation of 303.6. Also, the top of dam was measured at elevation 304.10 which is greater than the required modification elevation of 303.6. Therefore, no field modifications will be required.
- Modifications to Basin 012BE will include raising the emergency spillway elevation 1.4 feet. The existing primary spillway channel will be filled in and compacted. A new emergency spillway will be cut along the side of the embankment and carried into natural ground. Also, raise the top of dam elevation 1.5 feet. However, from the field survey conducted on 12/28/2011, the top of dam was measured at elevation 334.75 which is greater than the required modification elevation of 334.2. therefore, no field modifications will be required.

Geologic investigations of the area indicate layers of sandstone, shale and minor amounts of bituminous coal and underclay. The coal to be mined by RAC Mining, LLC, will be confined to the Mary Lee and Blue Creek seams of the Mary Lee Coal Group. The strata in the area is characterized by small scale normal faulting and gentle open folding.

All surface drainage from the proposed mining area flows into an unnamed tributary of the Locust Fork of the Black Warrior River.

Diversions are permanent (See diversion ditch criteria).

See the Underground mine map for known underground mines in the original permit application.

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See Attachment III-B-2(a), Watershed Map

See Attachment III-B-2(a), Basin 012E, 012AE, and 012BE detailed re-evaluation / modification design plans.

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Attachment III-B-2-A

<u>Basin No.</u>	<u>Location</u>	<u>Drainage Area (Acres)</u>
005P	SW/SW, Section 31 Township 16 South, Range 5 West	42
012E	NE/SW & SE/NW, Section 6 Township 17 South, Range 5 West	290
012AE	SE/NW , Section 6 Township 17 South, Range 5 West	258
012BE	SW/SE, Section 31 Township 16 South, Range 5 West	148
017P	NW/SE & NE/SE, Section 36 Township 16 South, Range 6 West	114

All within Jefferson County, Alabama, as found on the Sylvan Springs USGS Quadrangle.

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Attachment III-B-2-A

Pond Construction Criteria

The embankment for sediment basins (temporary and permanent) shall be designed and built using the following as minimum criteria:

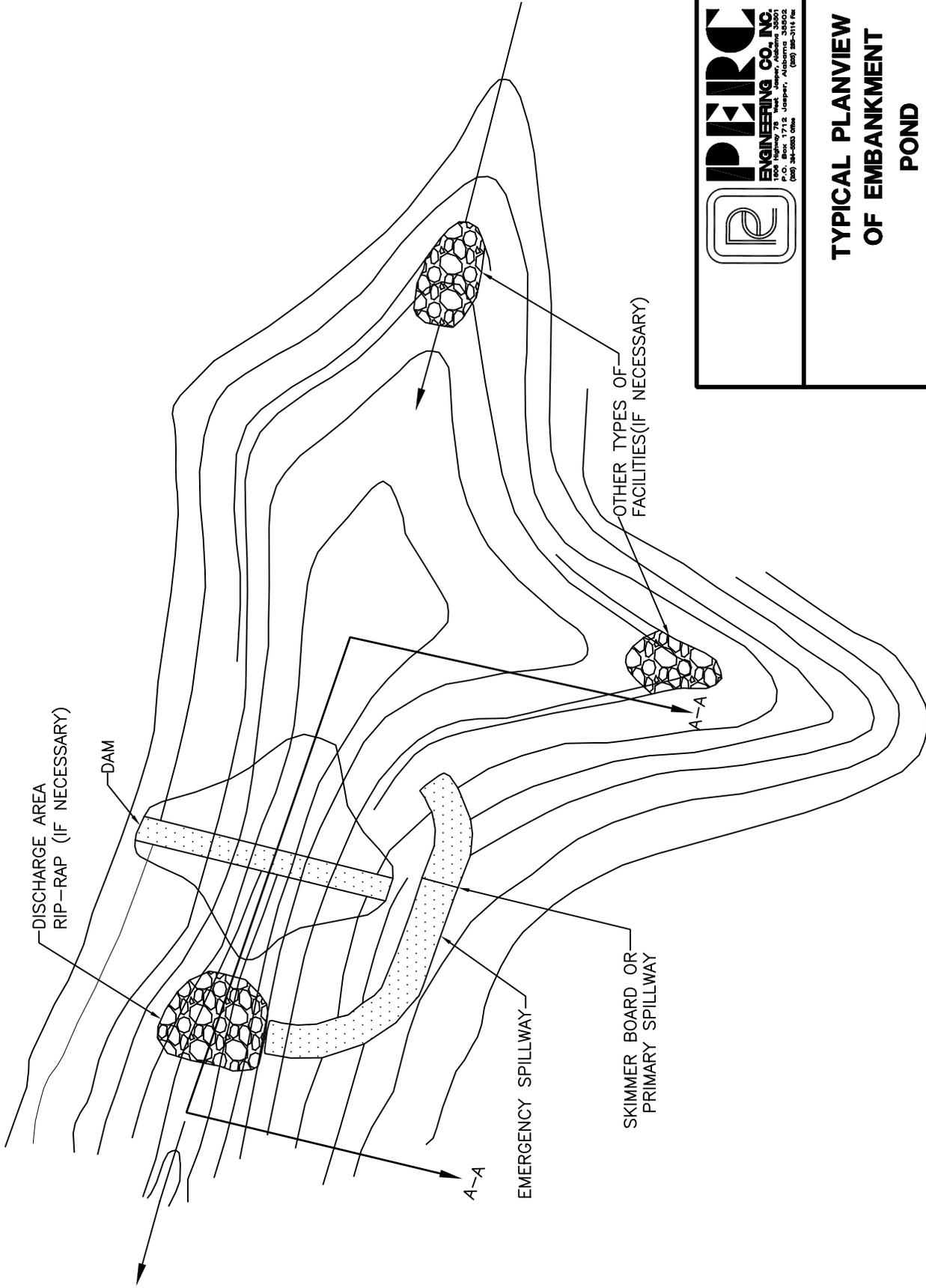
1. The top of the dam shall be no less than 12 feet wide.
2. See design sheet for maximum and minimum embankment slopes.
3. The foundation and abutments for the impounding structure shall be designed to be stable under all conditions of construction and operation of the impoundments, with a minimum static safety factor of 1.3 for the normal pool with steady seepage saturation conditions.
4. The dam shall be constructed with a cutoff trench based upon prudent engineering practices for the site. The cutoff shall be located on the dam centerline and be of sufficient depth to extend into a relatively impervious material from which the core of the dam shall also be constructed.
5. The embankment foundation area shall be cleared of all organic matter, all surfaces sloped to no steeper than 1v:1h, and the entire foundation surface scarified.
6. The entire embankment and cutoff trench shall be compacted to 95 percent density, based on standard proctor as outlined in ASTM.
7. The material placed in the embankment shall be free of sod, roots, stones over 6 inches in diameter, and other objectionable materials. The fill material shall be placed and spread over the entire fill area, starting at the lowest point of the foundation, in layers not to exceed 12 inches in thickness. Construction of the fill shall be undertaken only at such times that the moisture content of the fill material will permit satisfactory compaction in accordance with paragraph 5.
8. The pool area of the basin will be cleared of timber and large undergrowth.
9. The primary decant system when consisting of a pipe shall be installed according to Class C pipe installation for embankment bedding.
10. The primary decant system shall be equipped with a device, or constructed, such as to insure that subsurface withdrawal is accomplished to prevent discharge of floating solids. If a channel is used as the primary decant a skimmer shall be installed to prevent floating solids from discharging.

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11. A splash pad or riprap may be required under the discharge of the primary decant system where necessary to insure that the discharge does not erode the embankment.
12. The combination primary and secondary decant system shall be designed to safely carry the expected peak flow from a 25 year - 6 hour storm. The entire emergency overflow spillway channel will be a stabilized channel and will be stabilized upon completion of construction as specified within the detailed design plans using prudent engineering measures. These measures may consist of lining the spillway with concrete or a durable rock riprap, or the spillway being constructed in consolidated non-erodible material and planted with a mixture or both annual and perennial grasses, or a combination of any or all of the above.
13. Sediment basins using a single spillway system shall be an open channel of non-erodible construction consisting of concrete, durable rock riprap or its being constructed in consolidated non-erodible material as specified in the detailed design plans.
14. The settled embankment for temporary impoundments shall be a minimum of 1.0 foot above the maximum water elevation for the runoff from a 25 year - 6 hour, or a 10 year - 24 hour precipitation event (whichever has the greatest runoff). The settled embankment for permanent impoundments shall be a minimum of 1.0 foot above the maximum water elevation for the runoff from a 25 year - 6 hour, or a 10 year - 24 hour precipitation event (whichever has the greatest runoff).
15. If basins are built in series, then the combined decant system for each shall be designed to accommodate the entire contributing drainage area.
16. The dam and all disturbed areas shall be seeded with both perennial and annual grasses, fertilized and mulched in order to insure erosion is minimized. Hay bales or riprap may be placed at the toe of the dam immediately upon completion of construction.
17. The constructed height of the dam shall be increased a minimum of 5 percent over the design height to allow for settlement over the life of the embankment.
18. Final graded slopes of the entire permanent water impoundment area shall not exceed 2.5H-1.0V to provide for adequate safety and access for proposed water users.
19. Prior to Phase II bond release, additional data concerning water quality, water quantity, depth, size, configuration, postmining land use, etc., for each proposed permanent water impoundment, shall be submitted to the Regulatory Authority for permanent water impoundment approval.

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20. All sediment basins will be inspected for stability, erosion, etc. two (2) times a month until removal of the structure or release of the reclamation bond.
21. The embankment and spillway will be maintained by repairing any damage such as erosion, slope failure or spillway damage until removal of the structure or release of the performance bond.
22. All ponds shall be examined quarterly for structural weakness, instability, erosion, or other hazardous conditions and maintenance performed as necessary. Formal inspections shall be made on an annual basis, including any reports or modifications, in accordance with 880-X-10C-.20[1(j)] of the Alabama Surface Mining Commission Regulations.
23. Sediment will be removed from each pond when the accumulated sediment reaches the sediment storage volume as shown on the detailed design sheet.
24. Upon completion of mining, successful reclamation and effluent standards being met, each sediment basin not remaining as a permanent water impoundment will be dewatered in an environmentally safe manner (such as siphoning, pumping, etc.) and reclaimed to approximate original contours by the following procedure: A permanent diversion channel (designed for a 10 year - 24 hour precipitation event) shall be cut along the outer edge of the basin to re-route drainage around the basin and back through the stabilized spillway to allow reclamation of the sediment basin. The diversion channel shall be designed and grassed as per enclosed information. (See permanent diversion for basin disposal). Upon completion of the diversion channel the back slope of the dam shall be graded to a minimum 3H to 1V slope. The dewatered sediment basin area shall be seeded with some combination of the following: Fescue, bermuda, rye grass, canary grass and willows. After seeding the area shall be mulched. Any additional sediment or embankment material not used to meet original contour, if non-toxic, shall be spread in thin layers within the permit area and vegetated as stated in the approved reclamation plan. All toxic material encountered in the basin disposal shall be buried and covered with 4 feet of non-toxic material and vegetated as stated in the approved reclamation plan.
25. A qualified registered professional engineer or other qualified professional specialist, under the direction of the professional engineer shall conduct regular inspections during construction and upon completion shall inspect each basin for certification purposes.
26. Point source discharge embankments shall be constructed and abutments keyed into desirable material if at all possible. In the event that undesirable material is encountered, addition design and construction criteria shall be submitted prior to certification.

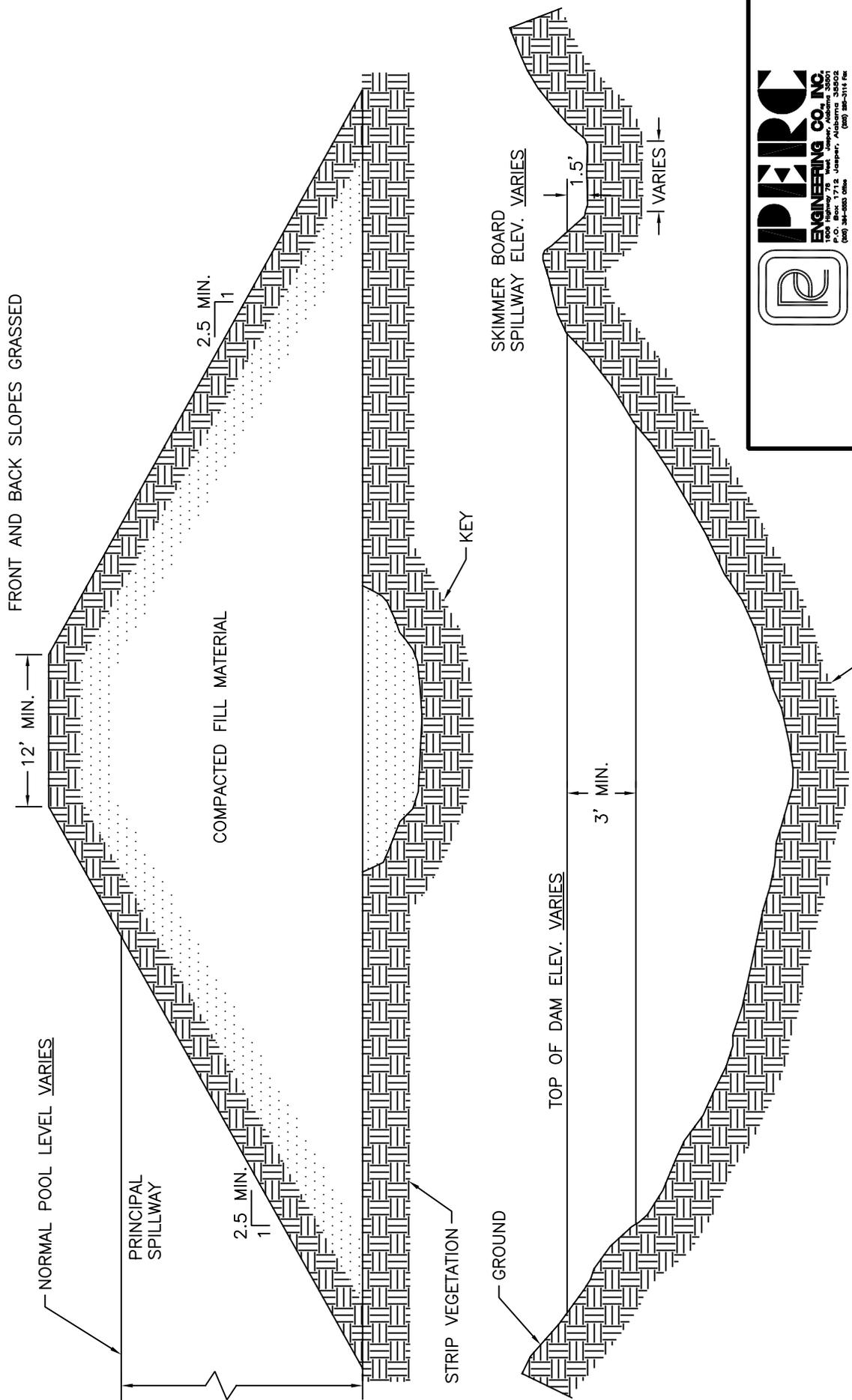


**TYPICAL PLANVIEW
 OF EMBANKMENT
 POND**

DRAWN BY:	P.T.O.	DATE:	8-10-05
DWG. NAME:	TYPICALS		
APPROVED BY:	W.K.M.	SCALE:	NONE

PLANVIEW OF EMBANKMENT POND

\\Perc600\perc_eng\Steve Miles\Steve_Doccs\Typicals\III-B-2(a)\Attachment_III-B-2(a).dwg 07/01/09 14:59



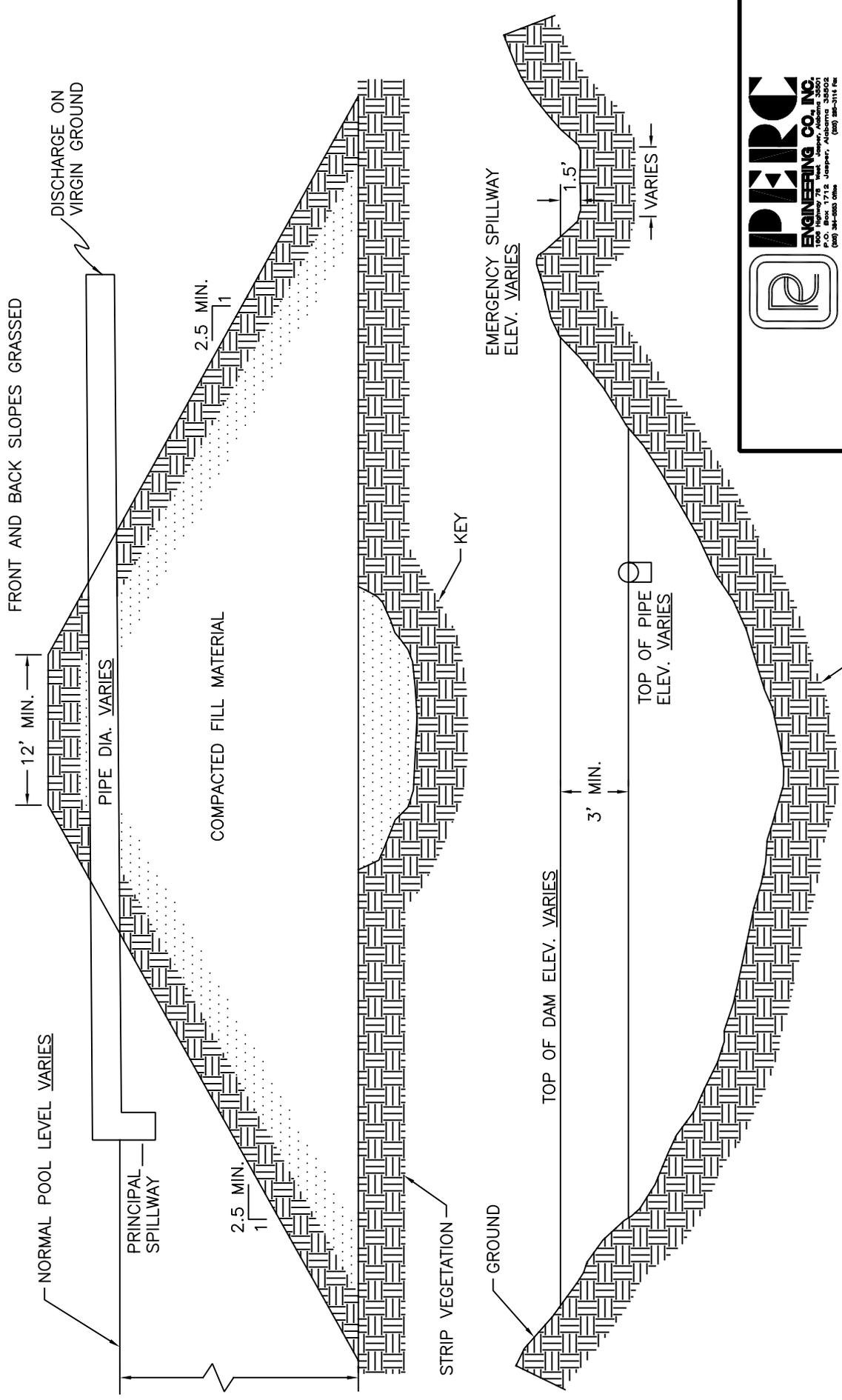
TYPICAL DAM DETAIL
NO SCALE



TYPICAL DAM DETAIL

DRAWN BY: P.T.O.	DATE: 8-10-05
DWG. NAME: TYPICALS	
APPROVED BY: W.K.M.	SCALE: NONE

ATTACHMENT III-B-2-A



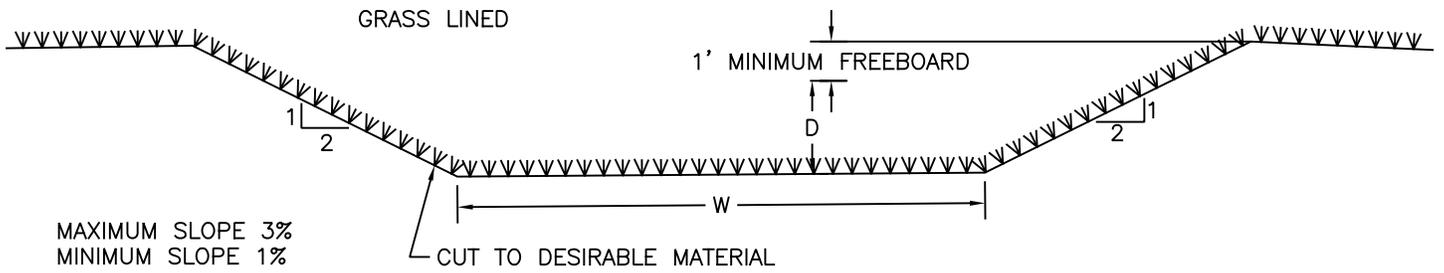
TYPICAL DAM DETAIL
NO SCALE



TYPICAL DAM DETAIL

DRAWN BY: P.T.O.	DATE: 8-10-05
DWG. NAME: TYPICALS	
APPROVED BY: W.K.M.	SCALE: NONE

ATTACHMENT III-B-2-A



$$Q = \frac{1.49}{N} A R^{2/3} S^{1/2}$$

N(LOOSE STONE OR GRASS LINED) = 0.035
 A = AREA
 R = AREA/WETTED PERIMETER
 S = SLOPE

* GRASS LINING: FESCUE, BERMUDA, RYE GRASS

DIVERSION CHANNEL DEPTH (D) FOR WIDTH (W) 8.0 FT.	
PEAK FLOW Q (CFS)	DEPTH D (FT)
1-15	0.5
15-50	1.0
50-100	1.5
100-180	2.0
180-270	2.5

DIVERSION CHANNEL DEPTH (D) FOR WIDTH (W) 10.0 FT.	
PEAK FLOW Q (CFS)	DEPTH D (FT)
0-15	0.5
15-60	1.0
60-120	1.5
120-210	2.0
210-320	2.5

DIVERSION CHANNEL DEPTH (D) FOR WIDTH (W) 12.0 FT.	
PEAK FLOW Q (CFS)	DEPTH D (FT)
0-20	0.5
20-70	1.0
70-150	1.5
150-250	2.0
250-383	2.5

DIVERSION CHANNEL DEPTH (D) FOR WIDTH (W) 15.0 FT.	
PEAK FLOW Q (CFS)	DEPTH D (FT)
0-20	0.5
20-90	1.0
90-180	1.5
180-300	2.0
300-450	2.5



TYPICAL PERMANENT DIVERSION FOR BASIN DISPOSAL

DRAWN BY: P.T.O.
DWG. NAME: TYPICALS

DATE: 8-10-05

APPROVED BY: W.K.M.

SCALE: NONE