

Applicant: Oak Grove Resources, LLC
Mine Name: Concord Preparation Plant
Permit Number: P- 3233 / Revision R-24

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 original permit and subsequent revision applications.

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>INCREMENT NO.</u>	<u>ACRES</u>	<u>DATES</u>	
		FROM	TO
1	786	Issuance of R-24	Life of permit
2	72	Issuance of R-24	Life of permit

*Month depends on date permit is issued.

The sequence of mining operations will be generally as follows:

- 1) Construction of Sediment Control Structures
- 2) Site Preparation
- 3) Construction
- 4) Site Reclamation
- 5) Revegetation

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

- (c) 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.

N/A

- (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.

N/A

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Attachment III-B-2(a)

CERTIFICATION STATEMENT:

I hereby certify that Attachment III-B-2(a) prepared for Oak Grove Resources, LLC Concord Preparation Plant, 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 is true and correct to the best of my knowledge, information and belief.



Leslie G. Stephens, P.L.S. & P.E.
AL Registration No. 14117-E

01/12/2016
Date



Attachment III-B-2 (a)

ADDENDUM TO THE GENERAL PLAN

The addendum to the general plan consists of submitting modification plans for Basin 017E. The Modification will be as follows:

1. The current primary spillway consist of a 18-inch diameter corrugated metal pipe laying on natural ground under the base of the embankment with a 18" Riser Pipe standing vertical in the Normal Pool Area. The Modification of the Primary Spillway will consist of replacing this pipe system with a Concrete Open Channel and Skimmerboard System.
2. The first step will be to Pump all water in the Normal Pool Area to Slurry Settling Ponds A & B and keep the Basin de-watered until the Modification is completed.
3. The next step is to cut off the Riser Pipe 1' above the current sediment level and fill the pipe with 3,000 psi concrete permanently closing the pipe. See cross section on Plan View Page.
4. The next step is to construct the Concrete Spillway System beginning with excavation of the Control Section, Intermediate Section and Tail Section consisting of a 35' wide Control Section, transition to a 20' wide Intermediate Section and a 20 ' wide Tail Section, all reinforced with 6x6 – W2.9 x W2.9 wire at an invert elevation of 539.9. See Signature drawing for transition details.
5. A 25' X 25' X 4" thick Concrete splash pad reinforced with 6x6 – W2.9 x W2.9 wire will be located at the discharge point of the primary spillway of Basin 017E Modified to prevent erosion.
6. The Current Top of Dam Elevation is 542.26, at the low point, based on the annual re-certification survey on 08/06/2015, therefore the Top of Dam will be raised 0.71' to Elevation 542.97.
7. Construction will be completed in 90 days or permission for additional time must be requested and received from the Director.

Basin 017E is to be Temporary and all information required for the Basin Removal will be submitted prior to Phase II Bond Release for the Basin. (See attached data and watershed map for basin location and preliminary hydrologic information). General design data is enclosed.

Geologic investigations indicate that Basin 017E Area is underlain by a shale and sandstone foundation overlain by coarse and fine coal refuse. 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 a Unnamed Tributary to Lick Creek and Lick Creek.

See Attachment III-B-2-(a) Detailed Design Plans for Basin 017E Modification.

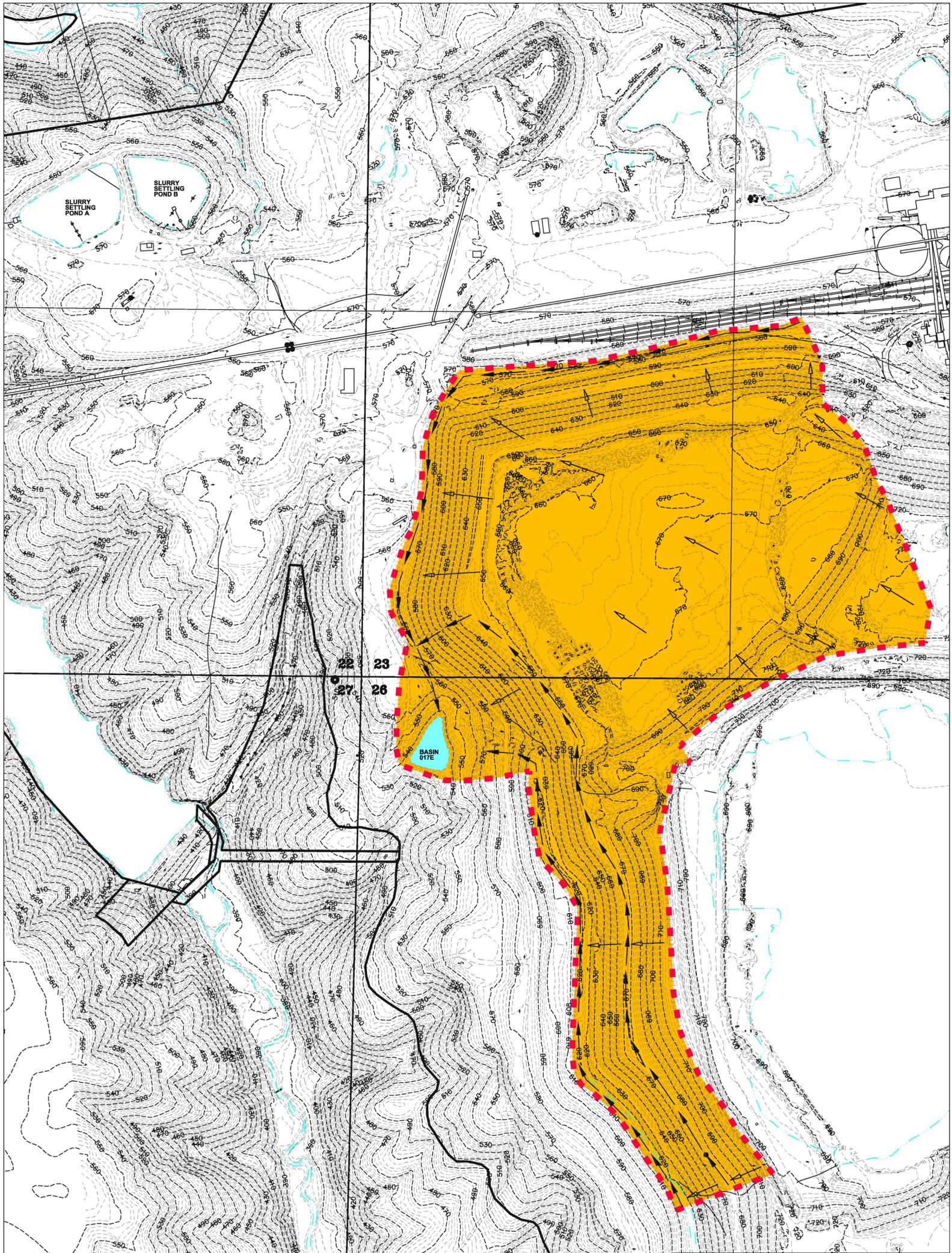
See Attachment III-B-2-(a) current Watershed Map

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Attachment III-B-2-A

Basin No.	Location	Drainage Area (Acres)
Basin 017E Modify	NW/NW of Section 26	69

Located within Township 18 South, Range 5 West, Jefferson County, Alabama, as found on the Concord Alabama USGS Quadrangle Map.

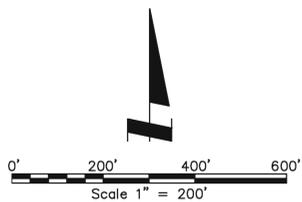


LEGEND

- PERMIT BOUNDARY
- 10' SURFACE CONTOUR INTERVAL
- 2' SURFACE CONTOUR INTERVAL
- WATERSHED BOUNDARY
- FLOW DIRECTION
- DIVERSION / SLOPE BENCH

LANDUSE AND CURVE NUMBER INFORMATION

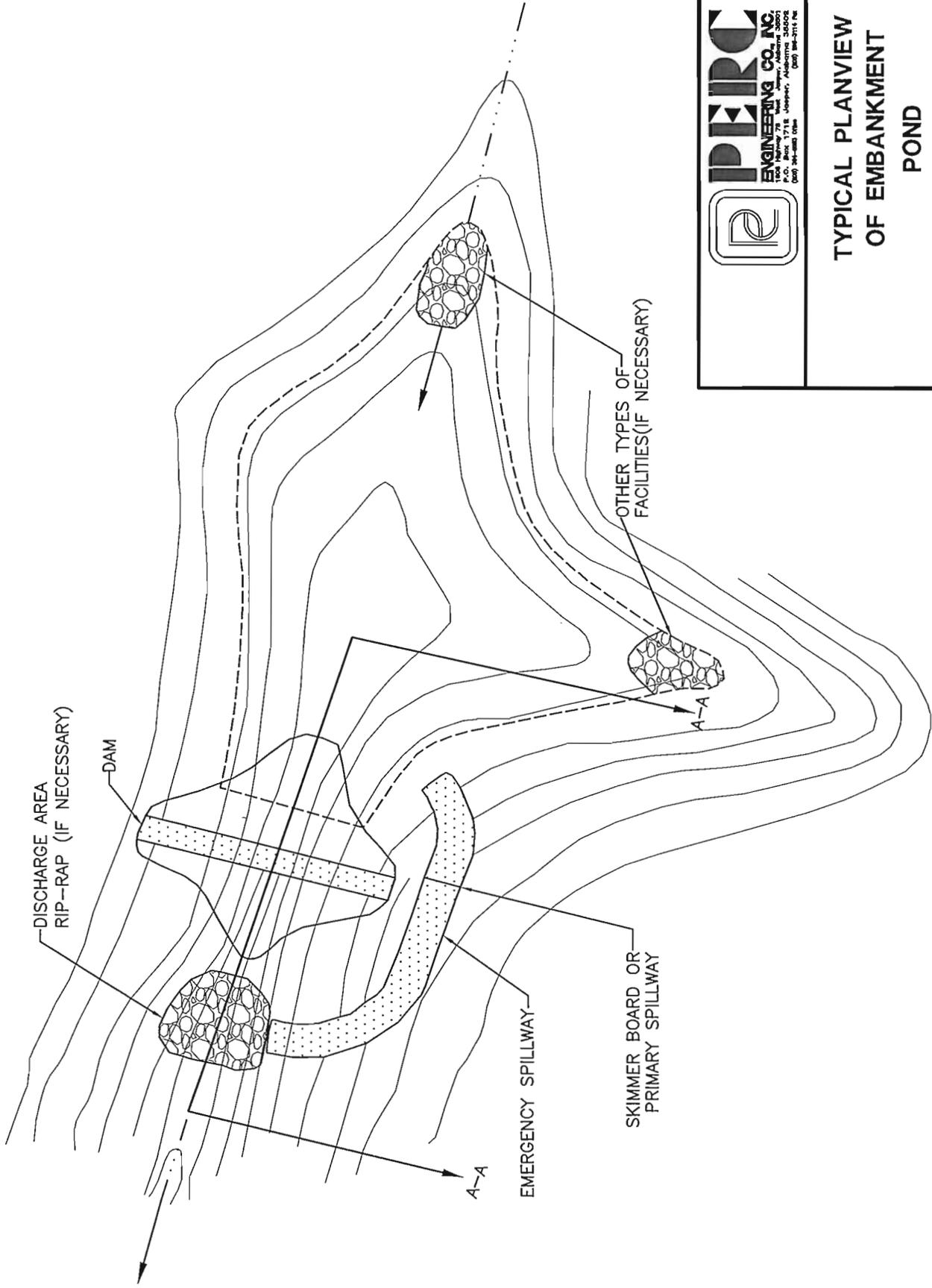
- GRADED AND BARE, CURVE NUMBER, 81
- SEDIMENT BASIN, CURVE NUMBER, 100



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OAK GROVE RESOURCES, LLC.
CONCORD PREP PLANT / P-3233 R-24
ATTACHMENT III-B-2(a)
BASIN 017E MODIFICATION
WATERSHED MAP

.DWG NAME:000PRR24WS 01 Paved New Contours	DATE:	01/11/2016
DRAWN BY:	S.A.E.	SCALE:
APPROVED BY:	L.G.S.	JOB NUMBER: 15-03904-012

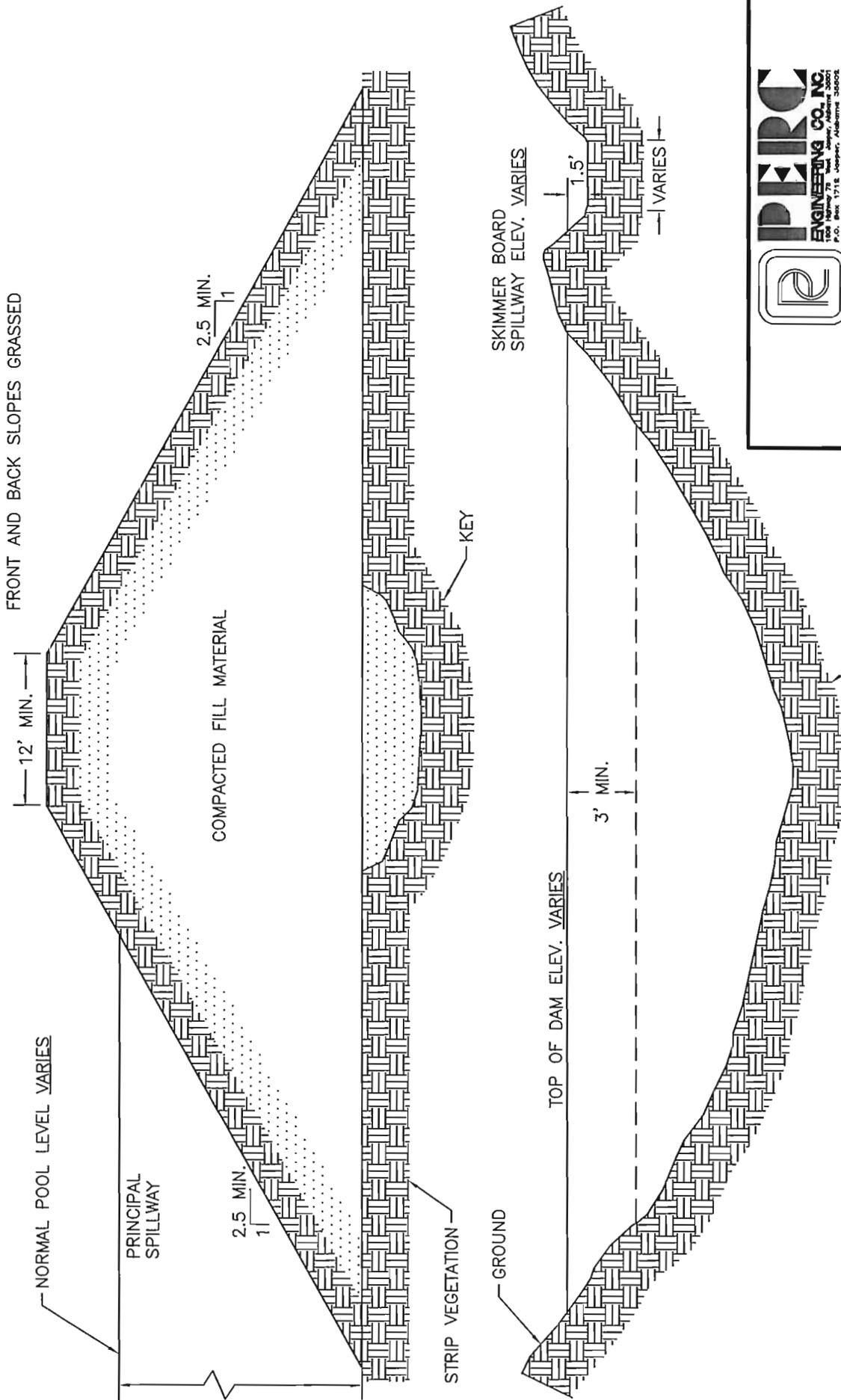


PLANVIEW OF EMBANKMENT POND



TYPICAL PLANVIEW OF EMBANKMENT POND

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



TYPICAL DAM DETAIL
NO SCALE



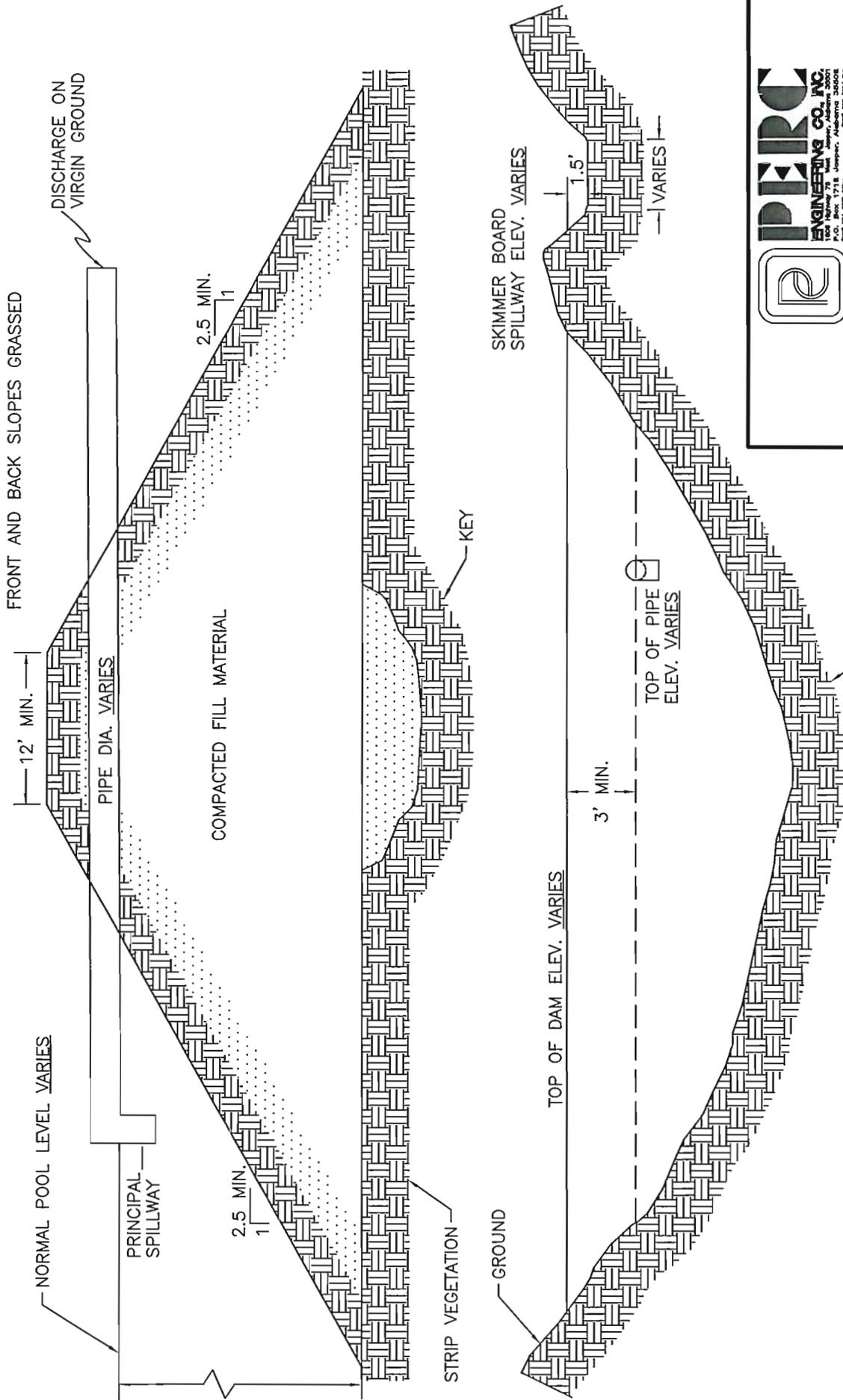
TYPICAL DAM DETAIL

DRAWN BY: P.T.O.
DWG. NAME: TYPICALS
APPROVED BY: W.K.M.

DATE: 8-10-05

SCALE: NONE

ATTACHMENT III-B-2-A



TYPICAL DAM DETAIL
NO SCALE

TYPICAL DAM DETAIL

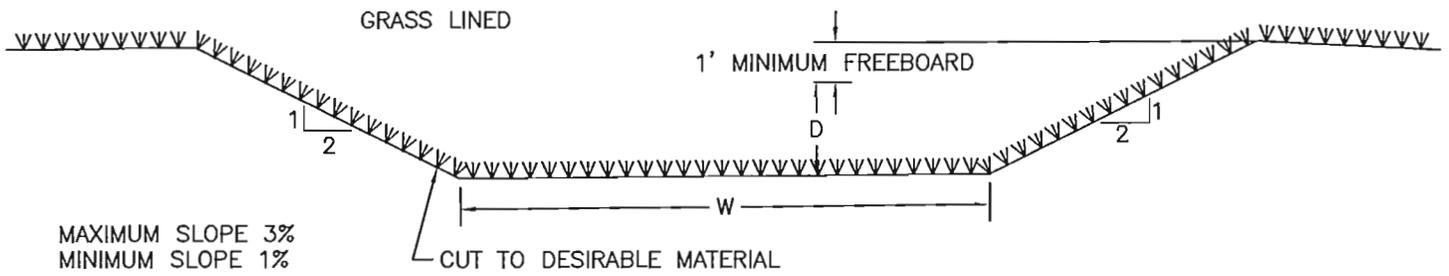
DRAWN BY: P.T.O.
DWG. NAME: TYPICALS

DATE: 8-10-05

APPROVED BY: W.K.M.

ATTACHMENT III-B-2-A

SCALE: NONE



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

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)
0-15	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)
0-25	0.5
25-90	1.0
90-180	1.5
180-300	2.0
300-450	2.5



TYPICAL PERMANENT DIVERSION FOR BASIN DISPOSAL

DRAWN BY: S.D.M.
 DWG. NAME: TYPICALS

DATE: 1/4/2011

APPROVED BY: L.G.S.

SCALE: NONE

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. During the construction of all embankments, alternate sediment control such as silt fencing, haybale dams, or vegetative barrier or some combination thereof will be place downstream of the disturbed area to control runoff.
4. 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 1.5 for the normal pool with steady seepage saturation conditions, and a seismic safety factor of at least 1.20.
5. 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.
6. 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.
7. The entire embankment and cutoff trench shall be compacted to 95 percent density, based on standard proctor as outlined in ASTM.
8. 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.
9. The pool area of the basin will be cleared of timber and large undergrowth.
10. The primary decant system when consisting of a pipe shall be installed according to Class C pipe installation for embankment bedding.
11. 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.
12. 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.
 13. 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.
 14. 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.
 15. 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).
 16. If basins are built in series, then the combined decant system for each shall be designed to accommodate the entire contributing drainage area.
 17. The dam and all disturbed areas shall be seeded with annual and perennial grasses, fertilized and mulched in order to insure erosion is minimized. Hay bales or riprap may be placed at the toe of the dam upon completion of construction.
 18. 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.
 19. 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.

20. 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.
21. 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.
22. 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.
23. 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.
24. Sediment will be removed from each pond when the accumulated sediment reaches the sediment storage volume as shown on the detailed design sheet.
25. 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.
26. A qualified registered professional engineer or other qualified professional specialist, under the direction of the professional

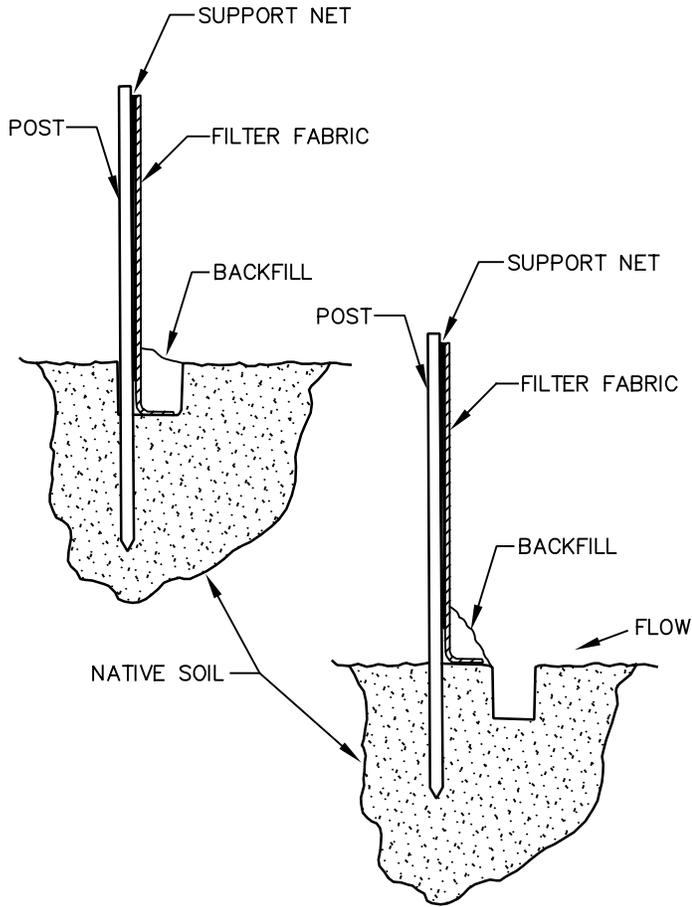
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engineer shall conduct regular inspections during construction and upon completion shall inspect each basin for certification purposes.

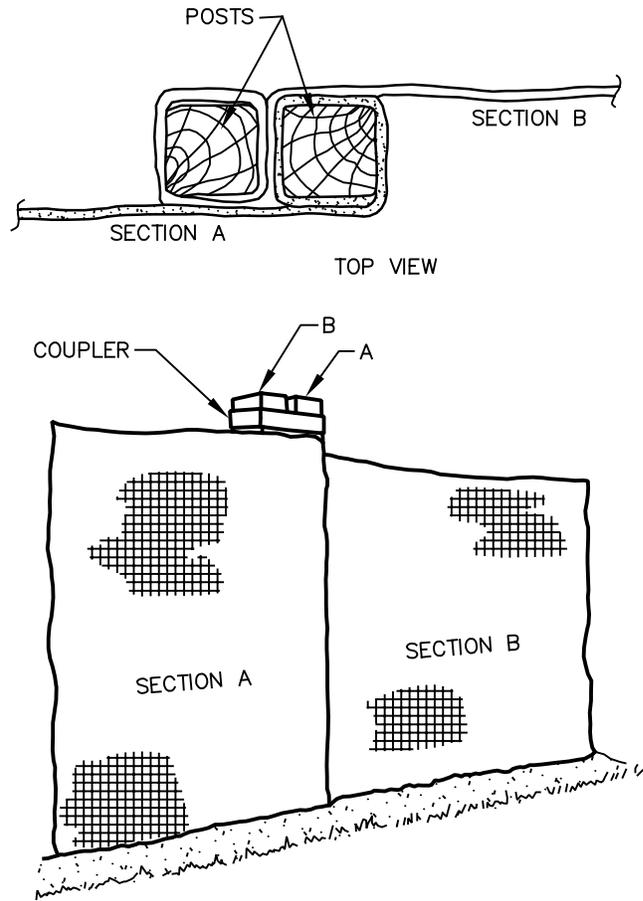
27. Point source discharge embankments shall be constructed and abutments keyed into desirable material if at all possible. In the event that undesirable material is encountered, addition design and construction criteria shall be submitted prior to certification.

Silt Fencing Design and Construction Specifications

1. Fence height - 3' including 6" trench flap.
2. Silt fencing will be secured into place by prefabricated wood or metal posts spaced as necessary.
3. The silt fence will have an equivalent opening size of 30-50 mesh by U.S. Standard Sieve.
4. The maximum particle size passing the silt fence will be .59 millimeter.
5. The flow rate of the silt fence will be 20 gallon per minute per square foot.
6. The silt fence will have a burst strength of 210 pound per square inch.
7. The grab tensile elongation of the silt fence will be 15%.
8. The grab tensile strength of the silt fence will be 100 pounds.
9. The silt fence will be installed by initially excavating a trench approximately 6" wide by 6" deep along the contour for the entire length of the silt fence. Upon completion of the trench, the silt fence will be stretched along the trench with the prefabricated wood or metal posts being driven into the ground approximately 1.5' deep against the upper wall of the trench. The 6" trench flap will then be placed into the trench and covered with compacted fill material.
10. Inspections of the silt fence will be made bimonthly and repair or replacement will be made promptly as required.
11. Accumulated sediment will be removed from the silt fencing when necessary to ensure the proper function of the silt fencing. Accumulated sediment will be disposed of within Coarse Refuse Area No. 1.
12. Prior to the removal of the silt fence, any silt or sediment retained by the silt fence will be seeded with a mixture of both annual and perennial grasses, fertilized, and mulched to establish a permanent and diverse vegetative cover.



TOE-IN METHOD



JOINING SECTIONS OF SILT FENCE

CONSTRUCTION SPECIFICATIONS

- 1.) SILT FENCING SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY FITTING THE ADJACENT FENCE SECTION.
- 2.) EACH SECTION OF FENCING SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 6".
- 3.) FENCING SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR RE-BARS AT A SPACING NOT TO EXCEED 6'.
- 4.) INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.



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 1606 Highway 78 West Jasper, Alabama 35501
 P.O. Box 1712 Jasper, Alabama 35502
 (205) 384-5553 Office (205) 295-3114 Fax

SILTFENCE TYPICAL

DRAWN BY: K.D.P.
 DWG. NAME: SILTFENC

DATE: 6-24-91

APPROVED BY: R.E.P.

SCALE: NONE

3. Diversions. (780.29, 816.43, 816.44)

Are diversions of overland flow or stream channel diversions proposed?

Yes No

If yes, complete the following:

(a) Is the diversion to be permanent?

Yes No

(b) Describe in detail the proposed diversion and include plans, maps and cross-sections which comply with 816.43 and 816.44.

(c) If diversions are temporary, enclose plans for removal, including a timetable and plans for restoration of vegetation, channel characteristics, etc.

Not applicable.

(d) Enclose approvals of other government agencies, where required.

None required.

4. Are excess spoil fills proposed?

Yes No

If yes, complete the following:

(a) Show on a map the location of all proposed fills and provide cross-sections of the proposed site and the design of the disposal structures.

(b) Include the results of the geotechnical investigation showing:

(1) A description of physical characteristics of bedrock and geological conditions in the disposal area; and

(2) A determination of possible adverse affects from subsidence due to past, present or future underground mining.

(3) Location of springs, seeps, or other ground water observed or anticipated in the disposal area.

(4) A technical description of the rock to be used in construction of rock chimney cores or rock drainage blankets, if applicable.

- (5) Results of stability analyses including strength parameters, pore pressures and long term seepage conditions; and
 - (6) Engineering design assumptions, calculations, and any alternatives considered.
- (c) Describe the construction, operation, maintenance and removal (if applicable) of the structure.
- (d) Include a surface water drainage and control plan for the fill.
- (e) Are rock-toe buttresses or keyway cuts to be used?
- () Yes (XX) No
- If yes, describe or show:
- (1) The number, location and depth of test borings or test pits used in describing subsurface conditions; and
 - (2) Engineering specifications used in the design

5. Transportation Facilities (780.33, 780.37)

- (a) Describe the measures to be taken to ensure the interest of the public and landowners affected are protected if disturbance within 100 feet of the right-of-way or relocation of a public road is proposed.

Not Applicable

- 1) Safety berms will be constructed adjacent to roadways to be disturbed to contain traffic.
 - 2) Proper signs, informing the traveling public of the disturbance, will be posted along the road right-of-ways 500 feet from the beginning of the disturbance.
 - 3) All safety requirements of the appropriate public health and safety, will be followed.
- (b) Describe any unique design, feature, or structure which is necessary for the road to meet the performance standards of Subchapter K using any necessary maps, plans, or cross-sections.
- (c) Describe, in detail, the measures to be taken during construction, maintenance and use of the transportation facilities to prevent damage to fish and wildlife and their habitat; public and private property; and erosion, siltation, and pollution of water.

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Roads will be constructed with the required ditching for proper drainage. Roads will be maintained with a dozer and motor grader patrol as required. Water will be used to reduce erosion and dust emissions. Roads will be located on ridge tops where possible or on the most stable slopes to minimize erosion. Vegetation will not be cleared except as necessary for roadway and ditch construction. After construction of the roads is complete, vegetation will be established on cut and fill slopes that exist along the all roads. To the extent possible, roads will be located above the sediment basins to be constructed for the mining operation in an effort to control or prevent additional contributions of suspended solids to stream flow or runoff outside the permit area and to comply with State and Federal water quality standards applicable to receiving waters and avoid the alteration of the normal flow of water in streambeds or drainage channels while preventing or controlling damage to public or private property. Where it is not possible or is impractical to locate roads in this manner, sediment control devices such as silt fencing, hay bale check dams and rock filter check dams will be used as necessary to maintain water quality. Roads not required for fire and sediment basin access will be reclaimed. See Attachment III-B-5 and Specifications for the construction, maintenance, and reclamation of Primary and Ancillary roads.