

SOUTHLAND RESOURCES, INC.

SEARLES MINE NO. 5, P-3894, R-12

ALABAMA SURFACE MINING COMMISSION

SURFACE MINING PERMIT APPLICATION

P A R T I I I

Prepared by:

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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

- | | |
|---------------|--------------------------|
| 3 Track-hoes | 2 Blast hole drill |
| 4 Rock trucks | 1 Fuel and service truck |
| 5 Dozers | 3 Loaders |

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)

See [Permit Map](#) and [Cut Layout Map](#).

The timing increments are as follows:

<u>Increment No.</u>	<u>Acres</u>	<u>Dates</u>	<u>To</u>
		From	
6	15.0	Currently bonded	Life of Mine
7	2.0	Currently Bonded	Life of Mine
3	17.0	Currently Bonded	Life of Mine
1	94.0	Phase 1 Bond Release	
5	56.0	Phase 1 Bond Release	
2	73.0	Phase 1 Bond Release Requested	
4	194.0	Mining in progress	12 Months After

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) Grading
- 8) Revegetation

OPERATION PLAN

The surface mining method of area and contour mining will be used at this mine site. Preparation will consist of removing timber, topsoil removal (if required), drilling and blasting of overburden, overburden removal, coal removal, regrading, topsoil replacement (if required), and revegetation. See [Cut Layout Map](#).

Increments No. 1, 2, 3, 4, 5, 6 & 7 may all be mined/disturbed simultaneously.

INCREMENT NO. 4

Increment No. 4 is currently bonded with mining ongoing simultaneously with two (2) spreads of equipment.

Spread No. 1

Spread No. 1 is currently mining in cut 4-61 as shown on the attached [Cut Layout Map](#). Material from cut 4-60 will be spoiled to the northwest into the adjacent open pit. Material from cut 4-61 will be spoiled to the southwest into that adjacent open pit from recent mining. Mining will advance in ascending numerical order to the northeast in ascending numerical order with material spoiled to the southwest into the previously mined cut until the conclusion of mining in cut 4-73. Southland Resources, Inc. request a delay in contemporaneous reclamation for the final highwall created in the NW/NE of Section 7, Township 20 South, Range 7 West. The delay is requested to allow mining in a forthcoming new permit to begin at the final highwall and advance to the southeast. See the [attached request to the Director](#).

Spread No. 2

Spread No. 2 is currently mining in cut 4-5 as shown on the attached [Cut Layout Map](#). Material from cut 4-5 is being spoiled to the southwest in an existing open pit. Upon completion of mining in cut 4-5, mining will continue into cut 4-6. Material from cut 4-6 will be spoiled into cut 4-5. Mining will advance to the northeast in ascending numerical order with material spoiled to the southwest into the adjacent previously mined cut until the conclusion of mining in cut 4-15.

As timing and equipment availability allows, mining will occur simultaneously with Spread No. 2 in cuts 4-23 thru 4-31. Material from cut 4-23 will be spoiled to the west into an existing open pit. Mining will continue advancing to the east with material spoiled to the west into the adjacent open pit. The southern most ends of cuts 4-23 thru 4-31 will remain open to allow a change in direction of mining at the completion of mining in cut 4-31.

Material from cut 4-32 will be spoiled to the north into the open end of cuts 4-23 thru 4-31. Mining will advance to the south with material spoiled to the north into the adjacent open cuts until the completion of mining in cut 4-40.

The Guide, Brookwood, Milldale and Carter coal seams will be mined Increment No. 4.

3. Attach a narrative explaining the construction modification, use, maintenance, and removal of the following facilities: (780.11)

(a) Coal removal, handling, storage, cleaning and transportation structures and facilities;

See the original permit.

(b) Spoil, coal mine waste and non-coal mine waste removal, handling, storage, transportation and disposal structures and facilities;

See the original permit.

(c) Mine facilities; and

See the original permit.

(d) Water pollution control facilities.

See Attachment III-B-2-A.

8. Is surface mining to be conducted within 500 feet of an underground mine? (780.27, 816.79)
(XX) Yes () No

If yes, describe measures to be used to comply with Section 816.79. Attach a map showing the location and extent of known workings in accordance with 780.14(a) (13).

The entire permit area has been shallow underground mined in the Brookwood and Milldale seams where not previously surface mined. Because the shallow underground mines within and adjacent to this permit area are abandoned, joint approval by MSHA and other regulatory authorities is not required. Research at the Department of Industrial Relations indicates there are is no known mapping of the underground old works for the area to be added by Revision R-12.

B. Engineering Plans.

All cross sections, maps and plans related to operations, reclamation and structures must comply with Section 780.10. Plans, appropriate calculation and conclusions shall be presented in a clear and logical sequence and shall take into account all applicable factors necessary to evaluate the proposed plan or design.

1. Existing Structures. (780.12, 786.21)

- (a) Describe each existing structure to be used, its location, current condition, approximate dates of construction and evidence (including relevant monitoring data) showing whether or not the structure meets the performance standards of Subchapter K or Subchapter B, whichever is more stringent and demonstrate whether or not the use of existing structures will pose a significant harm to the environment or public health or safety.

Not Applicable

- (b) If an existing structure requires modification or reconstruction to meet the performance standards, attach a compliance plan that 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.

Not Applicable

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)(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&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 Section 780.25(a) (2&3) and 816.81-816.85, for coal mine waste bank to be constructed on the increment you currently propose to mine.

None Proposed

- (e) Submit detailed plans which comply with Sections 780.25 (a)(2&3) and 816.91-816.93 for each coal mine waste dam and embankment to be constructed on the increment which you currently propose to mine.

None Proposed

GENERAL ENGINEERING PLAN CERTIFICATION STATEMENT

I, Sanford M. Hendon, a registered professional engineer, hereby certify that the information, cross-sections, data, maps, etc., contained in this general plan in Attachment III-B-2-A is true and correct to the best of my knowledge and belief.

McGehee Engineering Corp.



Sanford M. Hendon, P.E.

Alabama Reg. No. 18208

Date

ADDENDUM TO THE GENERAL PLAN

Revision R-12 was submitted to add 28 additional mining acres within the existing drainage area of Sediment Basin 003. As a result, the detailed design plans of Basin 003 are being modified to increase the sediment and detention storage. Basin 003 has not yet been constructed so no modifications in the field are required.

Upon written approval from ASMC, Sediment Basin 003 will be constructed and certified to ASMC prior to any disturbance in their respective drainage areas. General design data for Basin 003 is enclosed. See the attached data and [Watershed Map](#) for the sediment basin locations and preliminary hydrologic information. Sediment Basin 003 remains proposed as a temporary water impoundment. Removal plans and additional data will be submitted and approved by the Regulatory Authority prior to a Phase II bond release request.

As approved in the original application, the pond area of Sediment Basin 003 will be partially mined through. The embankment and spillway system will remain undisturbed during the mining in the pond area. Upon completion of mining in the immediate area of the sediment basin, the volume and surface area required in the approved detailed design plan will be re-established. Any reconstructed part of the pool area located in spoil material will be lined with a clay liner to insure that the impoundment retains water. See attached [Typical Clay Liner](#) drawing.

GENERAL DESIGN DATA

SEDIMENT BASIN	LOCATION	DRAINAGE AREA
003P	SW/NW, Sec. 5 T.20S., R.7W.	82.0

See the attached [Watershed Map](#) showing the current watershed conditions.

All basins are located in Tuscaloosa County, Alabama, on the Brookwood U.S.G.S. Quadrangle

SEDIMENT BASIN CONSTRUCTION SPECIFICATIONS

Sediment basins (temporary or permanent) will be designed and constructed using the following as minimum specifications:

1. EMBANKMENT REQUIREMENTS

- A) The minimum width of the top of the embankment will under no circumstance be less than twelve (12) feet.
- C) The embankment will have a minimum front and back slope no steeper than the slopes listed on the detailed design sheet.
- D) The foundation area of the embankment will be cleared and grubbed of all organic matter with no surface slope steeper than 1 horizontal to 1 vertical. The entire wet area, as measured from the upstream toe of the embankment to the normal pool level, will be cleared of trees and large brush.
- E) A core will be constructed in a cutoff trench along the centerline of the embankment. The cutoff trench will be of suitable depth and width to attain relatively impervious material.
- F) The embankment construction material will be free of sod, roots, stumps, rocks, etc., which exceed six (6") inches in diameter. The embankment material will be placed in layers of twelve (12") inches or less and compacted to ninety five (95%) percent of the standard proctor density, as set forth in ASTM.
- F) The embankment, foundation and abutments will be designed and constructed to be stable under normal construction and operating conditions, with a minimum static safety factor of 1.5 and a minimum seismic safety factor of 1.2, at normal pool level with steady seepage saturation conditions.
- G) The actual constructed height of the embankment will be a minimum of five (5%) percent higher than the design height to allow for settling over the life of the embankment.
- H) The design embankment height for both temporary and permanent impoundments will be a minimum of one (1) foot above the maximum water level anticipated from a 10 Year - 24 Hour or a 25 Year - 6 Hour precipitation event (whichever is greater).
- I) For embankments constructed as point source discharges, the embankment will be constructed and abutments keyed into undisturbed, virgin, ground if at all possible. In the event that this can not be achieved, additional design and construction specifications will be submitted in the Detailed Basin Design Plans.
- J) The embankment and all areas disturbed in the construction of the embankment will be seeded with a mixture of perennial and annual grasses, fertilized and mulched to prevent erosion and ensure restabilization. Hay dams, silt fences, rock check dams, etc. will be installed, where deemed necessary, as additional erosion prevention methods.

SEDIMENT BASIN CONSTRUCTION SPECIFICATIONS

2. DISCHARGE STRUCTURE REQUIREMENTS

- A) The primary spillway will be designed to adequately carry the anticipated peak runoff from a 10 Year - 24 Hour precipitation event. The combination primary and secondary (emergency) spillway system will be designed to safely carry the anticipated peak runoff from a 25 Year - 6 Hour precipitation event. When sediment basins are proposed in the drainage course of a public water supply, the spillway system will be designed and constructed to adequately carry the runoff from a 50 Year - 24 Hour precipitation event.
- B) Channel linings, for secondary (emergency) spillways will be a trapezoidal open channel constructed in consolidated, nonerodible material and planted with a mixture of both annual and perennial grasses being predominantly fescue and bermuda. In the event that the spillway can not be constructed in consolidated, nonerodible material the spillway will be lined with riprap, concrete, asphalt or durable rock (See Detailed Design Plans for Spillway Lining).
- C) When consisting of pipe, the primary spillway will be installed according to Class "C" pipe installation for embankment bedding.
- D) Sediment basins with a single spillway system, such as a skimmer board, will be a trapezoidal open channel constructed in consolidated, nonerodible material and lined with riprap, concrete, asphalt or durable rock (See Detailed Design Plans for Spillway Lining).
- E) The primary spillway will be designed and constructed with device to eliminate floating solids from leaving the impoundment. This device will consist of a turned down elbow when using pipe or a skimmer system when using an open channel spillway.
- F) When necessary, to prevent erosion of the embankment or discharge area, a splash pad of riprap, durable rock, sacrete, etc. will be installed at the discharge end of the primary spillway.
- G) The combined spillway systems, for sediment basins constructed in series, will be designed to adequately accommodate the entire drainage area.

3. INSPECTION, MAINTENANCE AND CERTIFICATION REQUIREMENTS

- A) Inspections will be conducted regularly during construction of the sediment basin by a qualified registered professional engineer or other qualified person under the direction of a professional engineer. Upon completion of construction, the sediment basin will be certified, by a qualified registered professional engineer, to the Regulatory Authority as having been constructed in accordance with the approved detailed design plans.
- B) Sediment basins will be inspected semi-monthly for erosion, instability, etc., until the removal of the structure or until a Phase III Bond Release is granted.

3. INSPECTION, MAINTENANCE AND CERTIFICATION REQUIREMENTS

- C) Sediment basins will be examined quarterly for structural weakness, instability, erosion, slope failure, or other hazardous conditions.
- D) If during the above described periodic inspections, it is determined that there exists signs of structural weakness, instability, erosion, slope failure, improper functioning, or other hazardous conditions, these will be repaired immediately.
- E) Standard anticipated maintenance will include repairing rills and gullies, repairing slope failures, re-seeding areas of failed or scarce vegetation, cleaning out or removing debris obstructing pipes and/or spillways to allow proper functioning, etc. Standard maintenance discovered during the above described periodic inspections will be performed immediately. Hazardous conditions observed during inspections will be reported immediately to the Regulatory Authority for further consultation or instructions.
- F) Retained sediment will be removed from each sediment basin when the accumulated sediment reaches the maximum allowable sediment volume as set forth in the detailed design plans.
- G) Formal inspections will be made annually, by a qualified registered professional engineer or other qualified person under the direction of a professional engineer, including any reports or modifications, in accordance with 880-X-10C-.20[1(j)] of the Alabama Surface Mining Regulations.

4. BASIN REMOVAL REQUIREMENTS

- A) Upon completion of mining, reclamation, restabilization and effluent standards being met, each sediment basin not proposed as a permanent water impoundment will be dewatered in a controlled manner by either pumping or siphoning. Upon successful dewatering, a determination will be made as to the retained sediment level in the basin. After determining the retained sediment level, a channel will be cut into the embankment down to the retained sediment level on the side of the embankment deemed most suitable to reach natural ground without encountering prohibiting rock. The embankment material removed from this newly constructed channel will be spread and compacted over the previous impoundment (wet area) area to prevent erosion and ensure restabilization. The newly constructed channel will be of adequate width (minimum 30 feet) and sloped to a grade (approximately 1% to 3%) which will cause all surface drainage to travel across this area in sheet flow, minimizing the possibility of erosion. Also, where necessary, hay dams will be installed in strategic locations across the width of the channel to retain sediment and slow the water velocity to a favorable rate. Upon removal of the embankment section, all disturbed areas will be graded in such a manner to ensure slope stability, successful restabilization and to minimize erosion. All disturbed areas will be seeded with a mixture of annual and perennial grasses, fertilized and mulched. No slope, existing or created in the removal of the sediment basin, will be left on a grade that will slip or slough.

5. PERMANENT WATER IMPOUNDMENT REQUIREMENTS

- A) Prior to a request for a Phase II Bond Release, all sediment basins being left as permanent water impoundments will have supplemental data submitted to the Regulatory Authority concerning water quality, water quantity, size, depth, configuration, postmining land use, etc.

- B) Final grading slopes of the entire permanent water impoundment area will not exceed a slope of 2 Horizontal to 1 Vertical to provide for safety and access for future water users.

TYPICAL DRAWINGS FOR EMBANKMENT TYPE BASINS

[Typical Pond Plan View](#)

[Typical Embankment Cross Section](#)

[Typical Clay Liner](#)