

CEDAR LAKE MINING, INC.

BULL GAP MINE, P-3960

ALABAMA SURFACE MINING COMMISSION

SURFACE MINING PERMIT APPLICATION

PART III-A

OPERATION PLAN

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](#)

- | | |
|---------------------------|--------------------------|
| 2 Backhoe Excavators | 2 Drills |
| 2 Loaders | 2 Fuel and Service Truck |
| 3 Dozers | 3 Rock Trucks |
| 1 Coal Crusher (Portable) | |

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 [Operations Map](#).

The timing of increments are as follows:

<u>Increment</u>	<u>Acres</u>	<u>From</u>	<u>Date</u>	<u>To</u>
1	116.0	Effective Date*		12 Months After
2	90.0	End of Inc. 1		12 Months After
3	151.0	End of Inc. 1		12 Months After
4	101.0	End of Inc. 2		12 Months After
5	49.0	Activated with Inc. 1		Life of Mine
6	26.0	Activated with Inc. 2		Life of Mine
7	17.0	Effective Date*		Life of Mine

* The Effective Date depends on the permit date of issuance.

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

ATTACHMENT III-A-1

OPERATION PLAN

The surface mining method of area 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 [Operations Map](#).

NOTES:

The following mine plan has been developed to re-mine areas that have been mined pre-law and to reclaim areas that were mined in the barrier pillars of old underground mining works of the on the Underwood coal seam. These areas have been previously mined by the contour mining method from the coal outcrop back until these old works were encountered or the depth became too great for efficient mining operations. Increment No. 5 and Increment No. 6 (as shown on the Permit Map) represent areas where all economical coal has been removed and the corresponding open pit has been abandoned and remains un-reclaimed. This operation plan proposes to reclaim these abandoned areas under Section 880-X-8J-.03, Rules of Alabama Surface Mining Commission. Increments No. 5 and No. 6 will be designated as non-bonded spoil placement areas which will be utilized to reclaim mine pits and highwalls where no minable coal deposits are available for mining due to past surface and underground mining operations.

In areas where open underground works (shafts and/or tunnels) are encountered, they will be filled with the best on-site clay material and sealed according to [Attachment III-A-6-3](#). Fill/spoil materials will be hauled via rock trucks to Increments No. 5 and No. 6 as mining conditions dictate but due to the depth of the bottom seam (Underwood), the swell factor of the blasted overburden materials will produce adequate material to fill the open pit areas of these increments.

Increment No. 1 and Increment No. 7 will be bonded concurrently prior to commencement of any mining operations and Increment No. 5 will be activated per ASMC requirements to serve as a non-bonded spoil placement area. Primary Road PR-01 will be constructed to provide access to Increment No. 1 and a coal stockpile/staging area will be constructed to store, process and load trucks for shipment to markets. Primary Road PR-02 will be constructed to provide access to Increment No. 5.

To facilitate proper drainage control for the proposed mining plan, Basins 001P, 002E, 003P, and 004P will be submitted to the regulatory authority for simultaneous approval and construction. These basins will be constructed and certified to the regulatory authority prior to any mining operations.

ATTACHMENT III-A-1(cont.)

Increment No. 2 and Increment No. 3 will be bonded concurrently after completion of active mining in Increment No. 1. Increment No. 6 will be activated per ASMC requirements to serve as a non-bonded spoil placement area. Primary Roads PR-03, PR-04 and PR-05 will be constructed to provide access to Increments No. 5 and No. 6.

INCREMENT NO. 7

Increment No. 7 will be initially bonded and mined as follows:

Increment No. 7 consists of primary and ancillary roads only. Increment No. 7 will be bonded prior to the issuance of the permit and will remain active for the life of the mine to be utilized to facilitate the mining of the other bonded increments.

INCREMENT NO. 5

Increment No. 5 as been designated as a non-bonded off-site spoil placement area per Section 880-X-8J-.03, Rules of Alabama Surface Mining Commission and will be activated prior to the issuance of the permit and will remain active for the life of the mine to be utilized as an off-site spoil placement area. Before spoils are placed in any area of Increment No. 5, sediment basins will be constructed and certified to the regulatory authority.

INCREMENT NO. 1

Increment No. 1 will be initially bonded and mined as follows:

Mining will commence in Increment No. 1 along the open highwall area at the section line between Sections 18 and 19, Township 12 South, Range 3 East. The initial cut will be oriented east-west to conform to the existing highwall. Material from the first cuts will be spoiled south off coal and/or hauled to the open cut in the SW1/4 of SE1/4 of Section 18 and spoiled due southeast of the previously augered area as shown on the Operations Map. Physical conditions as determined by the permittee will determine locations of spoil placement. Periodic spoil placement out of the normal mining sequence will be utilized to fill the open pit areas of Increment No. 5, north of Basin 004 and will fill the existing open cut with the previously referenced spoil placements to the backwater area of Basin 001. As Increment No. 1 is mined the cuts will pivot from the original east-west orientation to a southeast to northwest orientation to conform to the increment boundary line of Increment No. 2. Material will be spoiled to the southwest until mining is complete in Increment No. 1.

The Underwood coal seam will be mined in Increment No. 1.

See the attached [Operations Map](#) for the proposed pit orientation/alignment and proposed direction of mining advancement.

ATTACHMENT III-A-1(cont.)

INCREMENT NO. 6

Increment No. 6 as been designated as a non-bonded off-site spoil placement area per Section 880-X-8J-.03, Rules of Alabama Surface Mining Commission and will be activated prior to the issuance of the permit and will remain active for the life of the mine to be utilized as an off-site spoil placement area. Before spoils are placed in any area of Increment No. 6, sediment basins will be constructed and certified to the regulatory authority.

INCREMENT NO. 2

Increment No. 2 will be bonded and mined as follows:

Upon completion of mining in Increment No. 1, mining will commence along the southwest boundary of Increment No. 2 with cuts trending from the southeast to the northwest and advancing to the northeast. Overburden Materials will be spoiled to the southwest off coal. Periodic spoil placement out of the normal mining sequence will be utilized to fill the open pit areas of Increment No. 5. As mine advance from the initial cut sequence begins to approach the boundary of Increment No. 3, cuts will be developed along the existing highwall in the SW/SW of Section 17 to mine the area northeast of the auger area developed by permit P-3711. Cuts will trend from the southwest to the northeast and will advance due north/northwest. Overburden materials will be spoiled south/southeast off coal. To allow mining of the coal block due north of the auger area, the southwest terminus of these cuts will remain open to allow mining access to this area. As mining advance approaches and/or encounters underground mine works, the cuts will pivot and will be developed from due south/southwest to due north/northeast and will advance to the northwest to intersect the cuts developed during the initial mining of this increment. Overburden materials will be spoiled southwest off coal. Excess spoil from this area will be utilized to fill the open pit areas of Increment No. 6, north/northeast of Basin 010. Mining will continue in this manner in both mining areas until mining is complete in Increment No. 2.

The Upper Bynum, Lower Bynum and the Underwood coal seams will be mined in Increment No. 2.

See the attached [Operations Map](#) for the proposed pit orientation/alignment and proposed direction of mining advancement.

ATTACHMENT III-A-1(cont.)

INCREMENT NO. 3

Increment No. 3 will be initially bonded and mined as follows:

Mining will commence in Increment No. 3 along the previously reclaimed highwall located in the NE/SE of Section 18 and running due northeast through the NW/SW, SW/NW, SE/NW, NE/NW and the NW/NE of Section 19. The Upper Bynum and the Lower Bynum will be mined in this increment, the Underwood seam has been completely mined by underground mining methods and is not economical for mining. Cuts will be developed from the southwest to the northeast and will advance to the northwest. Overburden material will be spoiled southeast off coal. Periodic spoil placement out of the normal mining sequence will be utilized to fill the open pit areas of Increment No. 5. At the boundary of Increment No. 2 and Increment No. 3, overburden materials will be spoiled to the southwest and the southeast to facilitate efficient reclamation operations. To the northeast, the Upper Bynum is not continuous and physical conditions as determined by the permittee will dictate the extent of mining areas and spoil placement. Generally mining will advance on the upper two (2) seams from the southeast to the northwest. Mining will continue in this manner until mining is complete in Increment No. 3.

The Upper Bynum, Lower Bynum coal seams will be mined in Increment No. 3.

See the attached [Operations Map](#) for the proposed pit orientation/alignment and proposed direction of mining advancement.

ATTACHMENT III-A-1(cont.)

INCREMENT NO. 4

Increment No. 4 will be initially be bonded and mined as follows:

Mining will commence in Increment No. 4 along the open highwall area in the NE/NE of Section 17, the SE/SE of Section 8 and the SW/SW of Section 9. The initial cut will be oriented from the southwest to the northeast to generally conform to existing highwalls. Material from the first cuts will be spoiled to the southeast off coal. Physical conditions as determined by the permittee will determine locations of spoil placement. Periodic spoil placement out of the normal mining sequence will be utilized to fill the open pit areas in Increment No. 5 northeast of Basin 006 and in Increment No 6. northeast of Basin 009. Mining will advance to the north/northwest to the increment boundary spoil overburden materials to the southeast. Mining will continue in this manner until mining is complete in Increment No. 4.

The Lower Bynum and the Underwood coal seams will be mined in Increment No. 4.

See the attached [Operations Map](#) for the proposed pit orientation/alignment and proposed direction of mining advancement.

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 [Attachment III-A-3](#), Part III-A-5 & Part III-B-5

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

See [Attachment III-A-3](#) & [III-B-2-A](#), Part III-B-4 & Part III-B-5

- (c) Mine facilities; and

See [Attachment III-A-3](#)

- (d) Water pollution control facilities

See [Attachment III-A-3](#) & [III-B-2-A](#)

4.

Describe the means to be used to maximize the use and conservation of coal reserves in the permit area. (780.18, 816.59)

Maximizing the use and conservation of coal reserves in the proposed permit area will be accomplished by:

- 1.) Utilizing the most current and efficient mining practices for removal of coal reserves.
- 2.) Maintaining the most efficient explosive breakage to maximize overburden removal efficiencies and minimizing the toe areas of highwalls.
- 3.) Maintaining maximum efficient cut widths to minimize coal loss in the spoil toe.
- 4.) Rehandling overburden where required to maximize coal recovery normally lost in the spoil toe.
- 5.) Mining the deepest overburdens that are economically feasible.
- 6.) Periodically sending coal waste materials to outside coal preparation facilities for extraction of salable coal when feasible.
- 7.) Blending and processing coals to enhance marketability of lower quality seams.

5. Describe measures to be taken to ensure that all debris, acid forming and toxic-forming materials and materials constituting a fire hazard are disposed of (include contingency plans to prevent sustained combustion of material). (780.18)

Any acid and/or toxic forming materials encountered in the mining processes that may constitute a fire hazard will be segregated by selectively placing these materials within the area of the mine excavations a minimum of the (10) feet away from the highwall, a minimum of ten (10) feet above the pit floor and a minimum of fifty (50) feet from any major drainage courses. These acid and/or toxic forming materials will be covered with a minimum of four (4) feet of the best available non-acid, non-toxic and non-combustible materials occurring within the pit excavation area.

A BMP (Best Management Plan) shall be instituted specifically for the site which will outline minimum housekeeping standards for any materials such as oil, grease, used rags, etc. that may present a fire hazard to be properly stored on site in appropriate temporary containers that will avoid spontaneous combustion and/or leakage and disposed of in a timely manner in an approved landfill.

Any non-coal waste generated at the mining site or in the process of mining operations will be disposed of in a timely manner at approved off-site landfills that meet all applicable local, state and federal requirements.

Areas outside the immediate pit excavation areas such as coal stockpiles, that may generate combustible, acid and/or toxic forming materials, the following measures will be performed: After all coal has be removed and the coal stockpile area will no longer be used for coal storage, the base material of the stockpile will be removed and placed within the pit excavation area, a minimum of ten (10) feet up from the pit floor, and a minimum of fifty (50) feet away from any major drainage courses. These acid and/or toxic forming materials will be covered with a minimum of four (4) feet of the best available non-acid, non-toxic and non-combustible materials occurring within the pit excavation area.

ATTACHMENT III-A-3

COAL REMOVAL, HANDLING, STORAGE, CLEANING AND TRANSPORTATION STRUCTURES AND FACILITIES

Coal removal will occur in the sequence as described in the Operations Plan (Part III-A-1). Once uncovered, the coal will be broken by loader and transported to the coal stockpile area for both temporary storage and/or processing as deemed necessary.

Any coal processing operation such as crushing and screening that might be required for market specifications will be accomplished utilizing portable plants transported via truck to the site of the coal stockpile area. While crushing and/or screening plants are portable, they generally will remain on site for extended periods and are stabilized by either wood cribbing, concrete blocks or concrete footings. When crushing and/or screen plants are set up, they should be located such that all drainage from the site is routed through an approved sediment basin prior to leaving the permit area where chemical treatment may be performed as necessary to meet State and Federal water discharge quality limits. In addition a BMP (Best Management Practice) should be implemented to maintain good housekeeping and proper handling of oils and lubricants to prevent groundwater and/or surface water contamination. When these equipment units are removed from the site, all stabilizing appliances will be removed from the site to be reused or for disposal in an approved landfill.

The location for coal stockpiles will be carefully selected so as to minimize contact and contamination of local surface and groundwater at the site. To facilitate this, coal stockpiles will be constructed on hilltop and ridgetop sites to minimize surface drainage entering the stockpile area. When conditions prevent placement of coal stockpile areas on high ground, the coal stockpile will be sloped during construction to channel any sheet flow of surface water into diversions constructed to channel all surface drainage away from the coal stockpile area. Diversions will be constructed as outlined in Part III-3-B of this application. All surface runoff from stockpile areas will be diverted to approved sediment basins where chemical treatment may be added as necessary to comply with State and Federal water quality parameters.

Stockpile construction will be accomplished by the following: The proposed area will be cleared and grubbed of all organic material, removing and protecting all topsoil that might be encountered in accordance with Rules 880-X-10C-.07 thru 880-X-10C-.11. The stockpile subgrade will be graded to a relatively level state (1% - 3% slope) to provide positive drainage and minimize surface infiltration. Upon completion of the subgrade, a relatively impervious pad and/or liner will be constructed to a minimum thickness of twelve (12) inches. The pad or liner will be laid above the finished subgrade and will be made of the best available on-site clay material with a permeability coefficient of 1×10^{-6} cm/sec or less and shall be placed in six (6) inch lifts and compacted to ninety-five (95) percent of the standard proctor density. Upon final compaction and completion of the impervious clay pad, a top cap will be constructed made of compacted coal of necessary thickness to carry the weight of processing, loading and transportation equipment. Maintenance of stockpile areas shall be conducted as required to maintain proper drainage controls. Modifications to enlarge stockpile areas shall be handled in the same manner as outlined in initial construction.

Coal will be loaded from the stockpile area into highway transport trucks for shipment to final markets. Gravel pads will be constructed to prevent tracking at any point where haul roads from coal stockpile and/or mine areas access state or county roads. These gravel pads shall be constructed of coarse aggregate of 2" to 3" in diameter with a minimum width of eighteen (18) feet, a minimum of six (6) inches in thickness and shall extend a minimum of 100 feet from the existing paved road.

Coal stockpiles, sediment basins and diversions needed for proper operation of coal stockpiles shall be maintained until removal. After all coal has been removed from a permitted site and the coal stockpile is no longer required, the base material will be removed and handled as toxic and acid forming material. The base material from the stockpile site will be removed until no additional carbonaceous material is present and the removed material will be placed a minimum of ten (10) feet away from the highwall, a minimum of ten (10) feet up from the pit floor, and a minimum of fifty (50) feet away from any major drainage courses. These acid or toxic forming materials will then be covered with a minimum of four (4) feet of the best available non-acid, non-toxic and non-combustive materials. The stockpile area(s) will then be graded to match the existing approximate original site contours and all disturbed areas will be vegetated with appropriate combination of grasses and legumes as stated in the reclamation plan. Disturbed areas will then be fertilized and mulched to ensure permanent diverse vegetative covers.

Any materials such as oil, grease, rags, etc. that may present a fire hazard will be properly disposed of in an approved landfill. Any non-coal waste will be disposed of at approved off-site landfills that meet all applicable local, state and federal requirements.

All transportation facilities such as haul roads, access roads, etc. will be constructed and maintained to meet minimum design criteria including but not limited to the following: Existing roads that meet minimum requirements and design criteria of the Regulatory Authority will be used if possible to eliminate additional disturbance. New roads will be located on ridges or on the most suitable slopes for stability. The minimum width for any proposed roads will be cleared, grubbed and all topsoil removed (if required) and stockpiled for protection. Road beds will be constructed by placing and compacting lifts of suitable material to form an adequate sub-grade. The road will then be capped with a minimum of four (4) inches of compacted base material such as gravel, crushed stone, rock, chert or other suitable material (as approved by the Regulatory Authority) sufficient for its intended use. Routine maintenance such as resurfacing, upgrading and maintenance of drainage controls may be required in the course of mining to keep the roadways in adequate condition. All roads, existing or created for use in this mining operation, will have adequate sediment control facilities, such as silt fences, hay bale berms and/or excavated sediment trap sumps constructed where necessary to effectively catch and control sediment from disturbed areas. All materials used in the construction of the transportation facilities will be non-toxic and non-combustible. Where required, drainage control devices will be installed such that they are placed below the sub-grade, using standard engineering practices to design and construct said structures.

Drainage control will be accomplished by the use of drain pipes, ditches, cross drains and ditch relief drains. No sustained grades in excess of ten (10) percent will be constructed unless prohibited by existing conditions, to which sediment control facilities such as silt fences, hay dams and rock check dams will be installed at strategic locations to prevent erosion and insure stability. Grades greater than fifteen (15) percent will require ditch relief drains, cross over drains and road drainways installed at a minimum of three hundred fifty (350) feet apart. All disturbed areas adjacent to newly constructed roads will be revegetated in accordance with the approved Reclamation Plan (Part IV-C-5) immediately following construction. Routine vegetative maintenance will be administered when necessary to maintain a vegetative cover. Maintenance of drainage control facilities including: cleaning of road ditches, removal of sediment from structures and minor repairs may be required periodically. Road that are not to be left permanently, at the landowners request, will be removed in the following manner: the base material will be re-established by regrading and reshaping to blend with the immediate surrounding area. To prevent erosion and provide long term stability, terraces, cross drains, berms, etc. will be constructed where deemed necessary. Sediment control measures for all disturbed areas created or existing in the construction or use of proposed or existing haulroads will include but not be limited to the construction or installation of hay dams, silt fences, rock rock check dams, etc. and will be constructed in strategic locations as required.

Required sediment control facilities will be constructed or installed promptly following the construction of said haulroads, access roads, etc. Immediately following all construction activity, disturbed areas will be vegetated in accordance with the approved Reclamation Plan (Part IV-C-5).

Routine inspections and maintenance (such as regrading, resurfacing, maintenance of sediment control structures, spot revegetation and dust control) will be conducted regularly during the life of each road to ensure that each structure continually meets design and performance standards. Dust control will be achieved by the periodic application of water, chemical binders and/or dust suppressants. Any road damaged by a catastrophic event, such as a flood or earthquake, will be repaired as soon as practicable after the damage has occurred.

Routes of travel that are temporarily utilized within the mine area will be constructed to be compatible with its intended use. Temporary routes of travel will be maintained and routinely inspected to insure that they do not constitute a safety or environmental hazard. Dust control will be achieved by the periodic application of water, chemical binders and/or dust suppressants.

See Part III-B-5 for the primary and ancillary road layout, design, construction, maintenance requirements and specifications.

**SPOIL, COAL MINE WASTE AND NON-COAL MINE
WASTE REMOVAL, HANDLING, STORAGE, TRANSPORTATION
AND DISPOSAL STRUCTURES AND FACILITIES**

No coal mine waste will be present at this mining facility. No excess spoil disposal areas will be necessary at this mining facility. All non-coal mine waste will be transported by truck to the nearest applicable landfill.

MINE FACILITIES

Mine facilities will consist of one or more dry van type truck trailers for storage of spare parts, maintenance equipment and supplies, one or more equipment service trucks and fuel trucks with mounted storage tanks, one (1) large bulk fuel tank (approximately 10,000 gallon capacity), one (1) office trailer and two (2) Type 2 portable magazines for storing explosives. Bulk explosive tanks may be installed by outside contractors for storage of explosive materials to facilitate efficient blasting operations. All mine facilities will be located within the permit area and changes and maintenance such as enlargement and additions to these facilities may be periodically required. All previously listed facilities are portable and will be transported onsite at the start of mining operations and will be transported offsite after completion of operations. Equipment storage areas, which may consist of an equipment maintenance shop building, will be constructed as necessary for the operation. The purpose for these areas is to store equipment not in service or waiting for maintenance or repair. In the event a maintenance shop is deemed necessary, the shop building will be constructed of sheet metal covering a wooden frame built in such a manner as to facilitate quick and easy disassembly when no longer required at the site. Removal of shop facilities will be accomplished by systematically disassembling the structure and framing. If a concrete building slab has been utilized for the shop foundation, the slab shall be removed and disposed in an approved landfill. All parts of the building structure that is reusable will be removed from the site and all disturbed areas will be vegetated with appropriate combinations of grasses and legumes as stated in the reclamation plan. Disturbed areas will then be fertilized and mulched to ensure permanent diverse vegetative covers.

When mine facilities are not further needed, the areas disturbed by these facilities will be regraded to the approximate original contour, scarified and revegetated in accordance with the approved Reclamation Plan (Part IV-C-5). Equipment storage areas, constructed within the permit area, will be graded to a mild grade. Runoff from these areas will be diverted to and controlled by sediment basins proposed under this permit. Modifications to these areas will consist of regrading as necessary to maintain adequate surface conditions and removal will be part of the reclamation process. The area will be scarified, fertilized, limes as necessary, seeded and mulched in accordance with the Reclamation Plan (Part IV-C-5) approved in the permit.

WATER POLLUTION CONTROL FACILITIES

Water pollution control facilities, sediment basins, berms, diversions and drainage ditches shall be constructed prior to mine operation disturbance in particular increments and according to approved plans. Sediment basins will be constructed, prior to any disturbance in its respective drainage area, to collect sediment from the disturbed areas and shall remain operational during all actual mining phases and during the reclamation and restabilization phases. Sediment basins will be constructed under the supervision of a qualified Registered Professional Engineer or by a qualified person under his direct supervision. All sediment basins will be certified to the Regulatory Authority upon completion of construction as having been constructed in accordance with the approved design plans.

Areas where sediment basin embankments are to be built will be cleared and grubbed with the topsoil removed and stockpiled (if required). The basins will be constructed by bringing in the best available soil material based on soil strength parameters and permeability and compacting it in lifts until the construction specifications are met. Drainage structures will be installed as per approved design plans with any necessary erosion control and/or stabilization procedures such as riprap, concrete, drop structures, energy dissipaters, etc. being implemented as deemed necessary by the project engineer. Upon completion of construction the entire disturbed area will be revegetated in accordance with the approved Reclamation Plan Part IV-C-5).

MAINTENANCE

Sediment basins will be inspected semi-monthly for erosion, instability, proper operation, etc. until basin removal or until a Phase III Bond Release. Any minor instance of erosion, instability, improper operation, etc. will be repaired immediately. Routine maintenance of sediment basins shall include: spot seeding, fertilization and mulching to insure a good vegetative cover is maintained on the dam and areas around the basin, repair and stabilization of rills and gullies, regrading and repair of slope failures, repairs to discharge structures and erosion protection structures, cleaning and/or removing debris obstructing pipes and/or spillways to restore proper operation and the removal of stored sediment from the basins prior to it reaching the maximum level indicated on the approved plans. Any parameters observed during routine inspections that require major construction repairs and result in hazardous conditions will be reported to the Regulatory Authority for further consultation and/or instructions. All basins will be examined by a qualified person quarterly for weakness, instability, excessive erosion, etc. with regular routine maintenance performed as necessary. Formal inspections will be made annually with any reports or modifications being filed with the Regulatory Authority along with a certification from a Registered Professional Engineer that the basin has been maintained in accordance with the approved plans and 880-X-10C-.20[1(j)] of the Alabama Surface Mining Regulations.

REMOVAL

All sediment basins constructed during mining operations and not being left as permanent water impoundments shall, upon completion of mining, reclamation, restabilization and effluent standards compliance, be removed in the following manner: Upon written approval from the Regulatory Authority of the basin removal plans, the impoundment will be dewatered in a controlled manner by either pumping or siphoning. Upon successful dewatering, a determination will be made as to the level of retained sediment in the basin. Upon determining the retained sediment level, a permanent 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 the newly constructed channel will be spread and compacted over the previous impoundment (wet area) to prevent erosion and insure restabilization. The newly constructed channel will be of adequate design (width, depth and grade) to cause all surface drainage to travel across this area as with low flow velocities to minimize the possibility of erosion. Also, where deemed necessary, hay dams will be strategically located across the width of the channel to retain sediment and slow the water velocity down to a favorable rate. Where anticipated discharge velocities require further attention, energy dissipaters such as rock check dams, concrete flumes, sacrete bags, etc. will be installed or constructed at the exit section of the newly constructed permanent channel. Upon removal of the embankment section, the remaining embankment material will be graded to the approximate original contour. All disturbed areas will be graded in such a manner to insure slope stability, successful restabilization and to minimize erosion. All disturbed areas will be seeded, fertilized and mulched in accordance with the approved Reclamation Plan (Part IV-C-5). No slope existing or created in the removal of the basin will be left on a grade that may slip or slough.

6. Give a description, including appropriate cross-sections and maps, to measure to be used to seal or manage mine openings, bore holes, wells and other openings within the proposed permit area. (780.18, 816.13-816.15)

Mine openings within the permit area (other than blast holes) will be eliminated in the following methods:

- 1) Exploration Holes - Exploration holes will be backfilled with the drill cuttings and capped with two (2) feet of clay.

SEE [ATTACHMENT III-A-6-1](#)

- 2) Monitoring Wells - Groundwater monitoring wells will be cased using PVC pipe of equal diameter of the drilling bit used. This casing will extend a minimum depth equal to the depth necessary to reach competent rock material to prevent collapse of the well. The casing depth may vary depending upon the depth of the aquifer being targeted monitoring and will be installed with an anchoring/stabilizing shale trap collar with a bentonite plug locked in the competent rock strata. Groundwater monitoring wells may be temporarily sealed using a PVC cap of equal diameter as casing requires.

SEE [ATTACHMENT III-A-6-2](#)

Groundwater monitoring wells will be sealed at the time of abandonment with a concrete cap (2.0'x2.0'x.5').

SEE [ATTACHMENT III-A-6-2](#)

- 3) Mine Openings - Old works (abandoned underground mines) which may be encountered during the mining operation will be eliminated by the following process:

Prior to the backfilling or shooting of the final highwall all mine openings will be sealed with a clay material having a permeability ranging between 0.00001 and 0.000001 cm/sec. This clay material will be compacted in six (6) inch lifts to ninety-five (95%) percent of the standard proctor density, a minimum of five (5) feet above the top of the opening.

SEE [ATTACHMENT III-A-6-3](#)

- 4) Gas & Oil Wells – There are no gas or oil wells within the proposed permit area.

7. Give a description of steps to be taken to comply with applicable water quality laws, regulations and health and safety standards. (780.18)

Water Quality Laws - Positive drainage measures will be taken to divert and/or route all surface drainage from the proposed mining areas through an approved sediment structure for monitoring and treatment purposes. Monitoring and Reporting will take place as set forth in the approved Monitoring Plan (Part III-D & Part III-E) and NPDES requirements. When necessary, drainage will be chemically treated for pH adjustment or Iron precipitation with hydrated lime or caustic soda. Other treatment such as floating silt fences or flocculation bricks may be administered for Total Suspended Solids. These measures will be taken to remain in compliance with NPDES requirements.

Health & Safety Standards - Applicable approvals will be received prior to the construction of any sanitary absorption lines for bathhouse and offices. MSHA guidelines and regulations will be followed in all operations.

All dust, noise, and other required control testing will be current and performed by certified MSHA personnel as required.

Certification and training of all mine personnel will be current and updated by attending MSHA classes at the Walker Technology School, in Sumiton, Alabama.

All records will be maintained at the mine and available for inspection as required.

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

If yes, describe measures to be used (816.79). Attach a map showing the location and extent known workings. (780.14(a)(13)) Attach a copy of MSHA approval.

Abandoned underground mine works are present in the Underwood seam over a substantial portion of the proposed Bull Gap mine. (See [Permit Map](#) and/or [Hydro-Geo Map](#) for locations and extents of underground works.) When underground openings are encountered in the mining process, they will be sealed according Section III-A-6-3 of this permit. Historically the Mining Safety and Health Administration (MSHA) has not required joint approval with other regulatory authorities if the mine in question is inactive and/or abandoned. In some areas, to maximize coal recovery, the mining plan calls for the mining of old works (underground headings and/or pillars) as shown on the Permit Map and/or Hydro-Geo Map. MSHA will be notified by TASK Engineering Management Inc. prior to commencement of mining operations of the intention of Cedar Lake Mining, Inc. to mine near or through old works as described in the mining plan.

SEE [ATTACHMENT III-A-6-3](#) for typical details of sealing old underground works.