

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
- Dozers
- Crusher
- Service Trucks
- Loaders
- Track Excavators
- Portable Dry Screen
- Off Road Haulers

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>From</u>	<u>Estimated Life</u>
1	22	Issuance of Permit	60 Months

The sequence of mining operations will be generally as follows:

- 1) Construction of Sediment Control Structure
- 2) Clearing and Grubbing
- 3) Topsoil Removal (if required)
- 4) Overburden Removal
- 5) Coal Fines Recovery
- 6) Lime Application to Pit Floor
- 7) Regrading
- 8) Revegetation

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P- 3975

ATTACHMENT III-A-1
TYPE AND METHOD OF COAL MINING PROCEDURES

Area surface mining will be used at this site. Preparation will consist of (a) timber removal (b) topsoil removal (if required) (c) overburden removal (d) coal removal (e) regrading and revegetation. Once the site has been regraded and topsoiled (if required) soil samples will be analyzed (where required) and proper nutrients will be added before revegetation. Any problem that may arise will be handled by proper consulting personnel utilizing various support equipment and support personnel. The following increment and cut sequences and orientation are subject to change as market demands and mining conditions warrant. At no time will excess spoil or an exceedance of bonding coverage be created as a result of these changes. All approved drainage controls will be implemented within their respective areas as per approved plans prior to disturbance there within.

Coal fines will be removed and loaded onto trucks for direct shipment to the customer, dry screened on site and shipped directly to customer, or shipped to another permitted facility for blending with another coal seam.

Mining will commence within Increment No. 1 at the southwest end of cut No. 1 located within the SW/SW of Section 12 and progress northeast in a manner to uncover an area approximately 100 feet to 200 feet wide and 500 feet long. Pits will generally align southwest to northeast with advancement to the northeast. Select material along the base of the existing highwall will be removed and stockpiled for use as the growing medium over the final reclaimed surface. Overburden material from cut no. 1 will be temporally placed along the east edge of Increment No. 1 in a layer less than 4 feet thick.

Prior to beginning disturbance in the drainage area of Basin 001 it will be constructed and certified to the Regulatory Authority. Then diversions 1-2, 2-3, and 5-9 will be constructed. A berm 2.0 feet high x 4.0 feet wide will be constructed along the west end of the permit area to route drainage into Diversion 5-9.

As coal fines are removed from Cut No. 1 and an area of the pit floor washer fines removal is completed, lime will be broadcast on the pit floor at a rate of **18 tons per acre** to neutralize any fines left on the pit floor (up to a two inch thickness). This value was determined by the following:

- 1) Average percent Sulfur of Washer Fines from drill data: **1.069%**
- 2) Maximum Potential Acidity of Washer Fines:
 $(1.069)(31.25) = \mathbf{33.41^{***}}$
- 3) Lime needed to neutralize one ton of Washer Fines:
 $(33.41^{***})/1,000 = \mathbf{0.03341 \text{ tons CaCO}_3/\text{ton mat}'1}$
 $(0.03341 \text{ tons CaCO}_3/\text{ton mat}'1)(2,000 \text{ lbs/ton}) = \mathbf{66.82 \text{ lbs/ton}}$

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P- 3975

- 4) Additional Lime to treat one ton of Washer Fines to +15 ***
(15.00 ***)/1,000= **0.01500 tons CaCO₃/ton mat'l**
(0.01500 tons CaCO₃/ton mat'l)(2,000 lbs/ton)= **30.00 lbs/ton**
- 5) Total amount of Lime to treat one ton of Washer Fines to +15 ***
(66.82 lbs/ton) + (30.00 lbs) = **96.82 lbs lime/ton of fines**
- 6) Density of Washer Fines:
From site specific float/sink test: Float 74.77% / Sink 25.23%
Density of Washer Fines constituents from Pennsylvania Dept. of
Environmental Resources, Bureau of Mining and Reclamation:
Coal= 82.64 lb/ft³ and Clay= 158.4 lb/ft³
(74.77%)(82.64 lb/ft³) + (25.23%)(158.4 lb/ft³)= **101.75 lb/ft³**
- 7) Number of tons of Washer Fines 2 inches thick within one acre:
(0.167 ft)(43,560 ft²/ac)(101.75 lb/ft³)/2,000 lb/ton=
369.35 tons of fines/ac
- 8) Total amount of lime to treat Washer Fines 2 inches thick within
one acre:
(96.82 lbs lime/ton of fines)(369.35 tons of fines/ac)/2,000
lbs/ton = **17.88 (or +/- 18) tons/ac**

***** = tons CaCO₃/1,000 tons mat'l**

Calcitic (agricultural) lime is considered 100% CaCO₃ equivalent.

If there is more than 2 inches covering the pit floor then the lime rate will be 97 pounds of lime per ton of additional washer fines. This amount was determined by item (5) above. The 18 tons of lime per acre will be applied to the entire pit floor of the fines recovery area in Cut No. 1 where washer fines have been removed. Due to the fact that the sulfur content may change with respect to location, a composite sample of washer fines from the pit floor (near the location of the next cut) will be collected and analyzed for sulfur content at the beginning of cuts 2 and 3. If the sulfur percentage from the composite sample is greater than 1.069%, the liming rate for that cut will be re-calculated as shown above and the new liming rate applied per acre and per ton. If the sulfur percentage from the composite sample is equal to or less than 1.069%, the liming rate for that cut will be still remain at 18 tons per acre. All lime will be disced into the unconsolidated material remaining on the pit floor after the lime treatment is applied.

After the fines are removed from cut no. 1 clay material from the borrow area and/or Basin 001 excavation will be used to construct a lining. The southwest end of Cut No.1 will be lined with 8.0 feet(minimum) of clay material with a permeability no greater than 1×10^{-6} centimeters per second to minimize infiltration with the clay placed in 6" lifts compacted to 95% of the standard proctor. The clay material will be 8.0 wide minimum and extend to the drainage control berm. The lining will be keyed 2.0 feet minimum into the spoil. Based on Reclamation cross section B-B' the clay lining will require approximately 1500 cubic yards of clay. The

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P- 3975

borrow area has an area of approximately 1 acre. Excavating 1.5 feet deep would yield approximately 2400 cubic yards of material. There is also approximately 7,000 cubic yards of excavation required for the construction of Basin 001. The best clay in this area could be stockpiled for construction of the clay lining as well. Then overburden from cut no. 2 will be placed into cut no. 1.

Cut no. 2 will continue this sequence. As coal fines are removed from cut no. 2 and an area of the pit floor fines removal is completed, lime will be broadcast on the pit floor at a rate of 18 tons per acre to neutralize any fines left in the pit floor. If there is more than 2 inches covering the pit then the lime rate will be 97 pounds of lime per ton of additional coal fines/cleanings. This will be applied to the entire pit floor of cut no. 2. Then overburden from cut no. 3 will be placed into cut no. 2.

Cut no. 3 will continue this sequence. As coal fines are removed from cut no. 3 and an area of the pit floor fines removal is completed, lime will be broadcast on the pit floor at a rate of 18 tons per acre to neutralize any fines left in the pit floor. If there is more than 2 inches covering the pit then the lime rate will be 97 pounds of lime per ton of additional coal fines/cleanings. This will be applied to the entire pit floor of cut no. 3.

All acid forming and toxic material encountered in the mining process will be neutralized as outlined above and vegetated as stated in the reclamation plan. There will be 6 inches of select fill material placed on top of the reclaimed surface for a growing medium for the vegetation.

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

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;
 - (b) Spoil, coal processing waste and non-coal waste removal, handling, storage, transportation and disposal structures and facilities;
 - (c) Mine facilities; and
 - (d) Water pollution control facilities.
- See Attachment III-A.-3.
4. Describe the means to be used to maximize the use and conservation coal reserves in the permit area. (780.18, 816.59) Some of the measures are:
- A) Mining the deepest seam that is economically feasible to mine.
 - B) Rehandling overburden in order to maximize coal recovery that would normally be lost in the toe of the spoil.
 - C) Processing and blending coal that in its "raw" condition would not have a market.
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 in accordance with 816.89 and 816.103; include contingency plans to prevent sustained combustion of such material. (780.18)

All coal fines which are excavated will be transported off-site for sale.

All acid forming and toxic material encountered in the mining process will be neutralized as outlined in Attachment III-A-1 item 4 and 5:

4) Additional Lime to treat one ton of Washer Fines to +15 ***

(15.00 ***)/1,000= **0.01500 tons CaCO₃/ton mat'l**

(0.01500 tons CaCO₃/ton mat'l)(2,000 lbs/ton)= **30.00 lbs/ton**

5) Total amount of Lime to treat one ton of Washer Fines to +15 ***

(66.82 lbs/ton) + (30.00 lbs) = **96.82 lbs lime/ton of fines** The lime rate will be 97 pounds of lime per ton of additional washer fines.

All lime will be disced into the unconsolidated material after the lime treatment is applied.

The material will be covered with a minimum of 2 feet of mine spoil from the previous mining operation within the permit boundary. There will be 6 inches of select fill material placed on top of the reclaimed surface for a growing medium for the vegetation. The area will then be vegetated as stated in the reclamation plan.

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P- 3975

All non-coal waste and debris which may be accumulated at the site (including paper and wood shipping containers, empty oil containers, worn out machine parts, etc.) will be confined in appropriate temporary containers or storage areas and periodically transported to an offsite ADEM approved landfill.

Attachment III-A-3

- 3.a) Crushing and screening of the coal to be mined will be performed utilizing a portable plant transported to the site by truck and erected on site. Regular maintenance will consist of routine lubrication, oil checking and changing as necessary, etc. and will be conducted during the period the crusher and/or screen is in use. When no longer needed the plant will be disassembled and transported offsite by trucks.

All haulage roads shall be designed to the following minimum criteria and/or prudent engineering practice for the design of haulroads, except where said haulroad is a public highway. See Part III-B-5 for primary and ancillary roads detailed design plans.

To the extent possible roads will be located on ridges or on the most stable available slopes to minimize erosion, downstream sedimentation and flooding in an effort to prevent adverse effects to fish, wildlife and related environmental values.

Prior to construction, the roadway areas shall be cleared, grubbed, and all topsoil shall be removed and stockpiled. Vegetation will not be cleared for more than the width necessary for the road and associated ditch construction.

Roads will be constructed by placing and compacting lifts of suitable subgrade material to a grade suitable for the intended use of the road. Drainage pipes will be placed in embankments or cuts as necessary to assure proper drainage. Once the desired grade of subgrade material has been attained and all drainage structures installed roads will be surfaced with available gravel, rock, chert or other suitable material as approved by the state regulatory agency sufficiently durable for the anticipated volume of traffic weight and speed of vehicles to be used. The surface will be compacted until a desirable grade and surface is attained. No toxic or acid forming substances will be used in this surface material. No sustained grade will exceed 10 percent unless deemed necessary, in which case appropriate sediment control facilities will be constructed. If grades of greater than 15 percent are required cross-over drains, ditch relief drains and road drainways will be located at a minimum of 300 foot intervals.

All roads will be constructed and maintained so as to have adequate drainage, using ditches, cross drains, and ditch relief drains. Drainage pipes will be placed in embankments or cuts as necessary to assure proper drainage and hay bale check dams and silt fences will be used at strategic locations when necessary to control sediment runoff. Natural drainage ways will not be altered unless otherwise approved by the ASMC. For stability the side slopes of the road embankments

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P- 3975

and/or cuts will be seeded with temporary and perennial type grasses and mulched to aid in preventing erosion and to enhance germination of the seed. No modifications are expected and only routine maintenance will be required to maintain the surface of roads such as periodic grading and resurfacing. Spot seeded and mulching will take place as necessary to improve coverage of vegetation on side slopes and embankments. Haulroads and all Routes of Travel will be maintained with water and/or other materials to minimize fugitive dust emissions. Routine maintenance will be required to assure that all roads and all Routes of Travel continually meets performance standards and will consist of periodic grading, resurfacing and dust suppression. Dust suppression will consist of the application of water, chemical binders and/or other dust suppressants. No oil will be utilized in this process. Maintenance of erosion control facilities will include periodic removal of sediment from structures and repairs of areas damaged due to weather, etc. Unless retention of the roads is approved for post-mining land use the following procedures will apply. When no longer needed the roadbeds will be ripped, plowed and scarified. All road surfacing materials will be removed and placed within an open pit within the permit area. The natural drainage patterns will be restored by cutting slopes and shaping to blend with the natural drainage of surrounding areas. If necessary cross drains, dikes and water bars will be constructed to minimize erosion. Terraces will be used as necessary to provide long term stability on cut and fill slopes and to minimize erosion. Road surfaces will then be revegetated according to the reclamation plan approved for this permit application, which includes planting a mixture of up to 100 lbs. or more of various legumes and grasses.

Coal stockpiles, if determined necessary, will be located within the permitted and bonded area such that drainage from the area will be routed through one or more of the sediment basins that are to be constructed. In general an area will be graded to a relatively level state. Upon completion of the subgrade, a relatively impervious pad or liner will be constructed to a minimum thickness of 12 inches. The pad or liner will be made of a clayey material possessing a maximum permeability coefficient of 1×10^{-6} centimeters per second. The material will be placed in 6 inch compacted lifts to 95 percent of the standard proctor density. A pad will be constructed of coal material over the relatively impervious pad or liner with material recovered from the pit. The only modification to the stockpile areas may be to enlarge them and this operation, if necessary, will be handled in the same manner as new construction. Small terraces and/or temporary diversions will be used as necessary to minimize surface runoff across the stockpile areas. These facilities will be maintained periodically along with the coal pad which will be maintained by grading and reshaping as necessary. After the

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P- 3975

stockpile area has served its useful purpose the pad material that can not meet market specifications will be neutralized.

Additional BMP's will be placed around coal stockpiles. Coal stockpiles will be located within the mining cut as much as possible. Coal stockpiles located above the mining cut will have the pad area graded into the cut area with final reclamation. This will be covered in excess of 2 feet in the reclamation process.

Lime will be broadcast on the coal stockpile area at a rate of **18 tons per acre** to neutralize any fines left on the coal stockpile area (up to a two inch thickness). This value was determined by the following:

- 1) Average percent Sulfur of Washer Fines from drill data: **1.069%**
- 2) Maximum Potential Acidity of Washer Fines:
 $(1.069)(31.25) = \mathbf{33.41^{***}}$
- 3) Lime needed to neutralize one ton of Washer Fines:
 $(33.41^{***})/1,000 = \mathbf{0.03341 \text{ tons CaCO}_3/\text{ton mat'l}}$
 $(0.03341 \text{ tons CaCO}_3/\text{ton mat'l})(2,000 \text{ lbs/ton}) = \mathbf{66.82 \text{ lbs/ton}}$
- 4) Additional Lime to treat one ton of Washer Fines to +15 ***
 $(15.00^{***})/1,000 = \mathbf{0.01500 \text{ tons CaCO}_3/\text{ton mat'l}}$
 $(0.01500 \text{ tons CaCO}_3/\text{ton mat'l})(2,000 \text{ lbs/ton}) = \mathbf{30.00 \text{ lbs/ton}}$
- 5) Total amount of Lime to treat one ton of Washer Fines to +15 ***
 $(66.82 \text{ lbs/ton}) + (30.00 \text{ lbs}) = \mathbf{96.82 \text{ lbs lime/ton of fines}}$

- 6) Density of Washer Fines:
From site specific float/sink test: Float 74.77% / Sink 25.23%
Density of Washer Fines constituents from Pennsylvania Dept. of Environmental Resources, Bureau of Mining and Reclamation:
Coal= 82.64 lb/ft³ and Clay= 158.4 lb/ft³
 $(74.77\%)(82.64 \text{ lb/ft}^3) + (25.23\%)(158.4 \text{ lb/ft}^3) = \mathbf{101.75 \text{ lb/ft}^3}$
- 7) Number of tons of Washer Fines 2 inches thick within one acre:
 $(0.167 \text{ ft})(43,560 \text{ ft}^2/\text{ac})(101.75 \text{ lb/ft}^3)/2,000 \text{ lb/ton} = \mathbf{369.35 \text{ tons of fines/ac}}$
- 8) Total amount of lime to treat Washer Fines 2 inches thick within one acre:
 $(96.82 \text{ lbs lime/ton of fines})(369.35 \text{ tons of fines/ac})/2,000 \text{ lbs/ton} = \mathbf{17.88 \text{ (or +/- 18) tons/ac}}$

***** = tons CaCO₃/1,000 tons mat'l**

Calcitic (agricultural) lime is considered 100% CaCO₃ equivalent.

All lime will be disced into the unconsolidated material remaining on the pad after the lime treatment is applied. and vegetated as stated in the reclamation plan. There will be 6 inches of select fill material placed on top of the reclaimed coal stockpile pad surface for a growing medium for the vegetation.

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P- 3975

- b) There is adequate spoil room available on site and excess spoil disposal facilities are not necessary. There will be no coal processing which generates waste so no coal waste disposal facilities are necessary. Any non-coal wastes will be disposed of within an offsite disposal area which meets all Federal, State and local laws and ordinances for permanent disposal of such materials.
- c) There will be no mine facilities at this site other than a portable office which will most probably be an office trailer or a converted mobile home and will be removed from the site soon after the end of the mining process. There is a possibility that during the life of the permit an equipment maintenance shop may be constructed at this site. If this decision is made the building will be located within the permitted and bonded area. Generally these buildings are constructed of sheet metal covering a wooden frame built around poles and are erected in a manner that will facilitate disassembly and relocation to another site after equipment is removed from the area. Any modification or addition to the structure would be of similar construction. Periodic maintenance including painting and winterizing will be done either by contractors or mine personnel. After mining is completed and the equipment is removed from the site, the building will be disassembled and the various structural components will be transported via truck to another location. There will be 6 inches of select fill material placed on top of the reclaimed mine facility areas for a growing medium for the vegetation. The area will then be vegetated as stated in the reclamation plan.
- d) Water pollution control facilities, sediment basins, berms, and drainage ditches shall be constructed prior to mine operation in a particular increment according to approved plans. These facilities will be used to control runoff from the mine and will be inspected and maintained until reclamation of the area is complete. Sediment basin construction and any subsequent modifications that may be required will be conducted under the general supervision of a qualified registered professional engineer and will be done in accordance with the approved design plans. The dam will be constructed of the best available soil material based on soil strength parameters and permeability. The dam core wall will bear on unyielding, relatively impermeable consolidated rock and the balance of the dam structure on the prepared compacted natural soil material present at the site. The dam will be built in horizontal lifts beginning at the lowest point of the foundation with each lift being thoroughly compacted. The drainage structure will be installed as outlined on the detailed design plans and shall be stabilized with respect to erosion using riprap, concrete paving, energy dissipators, vegetation or otherwise. After construction of the basin, the

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P- 3975

dam and all areas disturbed by construction will be limed, fertilized, and seeded with an appropriate mixture of grasses and legumes, then mulched.

Routine maintenance of the sediment basins will consist of spot seeding, fertilization and mulching to insure that a good vegetative cover is maintained on the dam and areas around the pond, repair and stabilization of any rills and gullies which may develop, repairs to discharge structures and erosion protection structures as required, and removal of entrapped sediment from the basins prior to its reaching the maximum level indicated on the approved plans. All sediment basins will be inspected quarterly by the operator's personnel and annually by a registered professional engineer and any required maintenance will be completed at the earliest possible time by the operator.

The basin is proposed, no modification plans are required. 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.

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 temporary diversion channel (designed for a 10 yr. -24 hr. 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 for the reclamation of the sediment basin. The diversion channel shall be designed and grassed as per enclosed information. (See permanent diversion channel for basin disposal) Upon completion of the diversion channel the embankment will be breached to the existing sediment level to prevent the impoundment of water. The breach will be graded to a minimum side slope of 2.5 to 1 and revegetated and/or riprapped as to prevent erosion and ensure the stability of the exposed breach. The remaining back slope of the embankment will be graded to a minimum 3 to 1 slope. The dewatered sediment basin will be seeded with some combination of the following: Fescue, bermuda, rye grass, canary grass, and willows. After seeding the area will be mulched. Any additional sediment or embankment material not used to meet approximate original contour, if non-toxic, will be spread in thin layers within the permit area and vegetated as stated in the reclamation plan. All toxic material encountered in the basin disposal will be buried and covered

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P- 3975

with 4 feet of nontoxic and noncombustible material and vegetated as stated in the reclamation plan.

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P-

6. Give a description, including appropriate cross-sections and maps, of measures 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)

No mine openings exist in the area of this proposed permit. Bore holes, wells, and other openings will be backfilled with cuttings from the holes and capped with clay or other impervious material. Abandoned monitoring wells will be sealed with a concrete cap which is approximately 2'x 2'x 0.5'. See Attachment III-A-6 for typical illustration of methods to be used to seal and/or manage bore holes and wells.

Any abandoned plugged and unplugged gas and oil wells found during mining of the old works will be sealed as outlined by the Alabama Oil and Gas Board after all coal is removed from the vicinity of the well.

Plugged and abandoned wells will be squared up and a device will be used to detect the presence of gas. If gas is present, the area of flow will be sealed by placing concrete/grout or sacrete to a depth of 25 feet and a 3/8 inch steel plate welded across all casing stubs. If gas is not present, a 3/8" inch steel plate will be welded across all casing stubs. A written report of the resealing process used on each plugged and abandoned well will be submitted to the ASMC and Alabama Oil and Gas Board within 30 days.

Unplugged wells will be temporarily sealed and restored by the following process: the owner of the well will submit a temporary abandonment and restoration plan to the Alabama Oil and Gas Board for approval. The well will be sealed for temporary abandonment prior to mining through and restored in accordance with the approved plan to the Alabama Oil and Gas Board.

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

Surface runoff will be routed through sediment control basins prior to being discharged from the permit area. Discharges from sediment basins will be monitored by in-house personnel or consultants, at the discretion of the permittee, as necessary to assure compliance with applicable State and Federal Laws and Regulations. Chemical treatment with aqueous sodium hydroxide solution will be used on water entering the drainage course of the existing basins if this is determined necessary to achieve compliance with State and Federal Laws. On occasion, a solution of chemically hydrated lime and water will be used in sediment basins for immediate correction of pH imbalances. With proper pH, the heavy metals will precipitate to the bottom of the basins and will not exit the discharge pipe or spillway. Alum may be used on occasion if necessary to facilitate flocculation and precipitation of suspended

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P-

solids. A permit to discharge under the National Pollutant Discharge Elimination System has been applied for and discharges from the proposed basins will be monitored and results of that monitoring, both compliant and non-compliant, will be reported in accordance with the NPDES Permit and the hydrologic monitoring plan shown elsewhere in this permit application. A trained and qualified health and safety staff will be contracted to assure that all health and safety standards and MSHA regulations are complied with. Certification and training of all mine personnel will be current and will be updated as necessary by attending MSHA classes taught by certified personnel. All dust, noise and other required control tests will be current and will be performed as necessary by certified MSHA personnel. Records of all testing required will be kept at the mine and will be available for inspection by the Regulatory Authority. All necessary permits for field absorption systems for the office and similar facilities will be obtained prior to construction of these facilities. Haul roads will be maintained with water and/or other materials to minimize fugitive dust emissions.

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P-

8. Is surface mining to be conducted within 500 feet of an underground mine? (780.27, 816.79) () Yes (XXX) 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). Attach a copy of MSHA approval.

B. Engineering Plans

All cross-sections, maps and plans related to operations, reclamation and structures must comply with Section 780.10. Plans, appropriate calculations 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 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.

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P-

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. 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?
(XXX) Yes () No

If yes, complete the following:

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

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P-

Attachment III-B-2-A

CERTIFICATION STATEMENT:

I hereby certify that Attachment III-B.-2.A prepared TTJ, LLC's, Berry Mountain Fines Recovery Operation, are 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

Leslie G. Stephens, P.E., P.L.S.

AL Registration #14117-E

9/25/2012

Date



Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P- 3975

GENERAL PLAN

The general plan consists of constructing one (1) proposed sediment basin, Sediment Basin 001P for the life of the mine. Detailed design plans for Basin 001P will be submitted to the Regulatory Authority and upon written approval from the Regulatory Authority the basins will be constructed and certified to the Regulatory Authority prior to disturbance in their drainage areas. General design data is enclosed. Basin 001P is to remain as a permanent water impoundment, fish and wildlife habitat. Data to qualify the sediment basin as a permanent water impoundment will be submitted to the Regulatory Authority prior to phase II Bond Release. (See attached data and watershed map for basin location and preliminary hydrologic information).

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

See Attachment III-B-2(a), Basins 001P Detailed Design Plans.

All surface drainage from the proposed mining area flows into the Calvert Prong of Little Warrior River.

Geologic investigations indicate that the proposed permit area consists of a sandy, weathered spoil produced from the mining of the Rosa Seam overlying a deposit of washer fines (to be recovered). The pit floor which underlies the washer fines is characterized by gentle, open folding. No faulting has been identified within the proposed permit area.

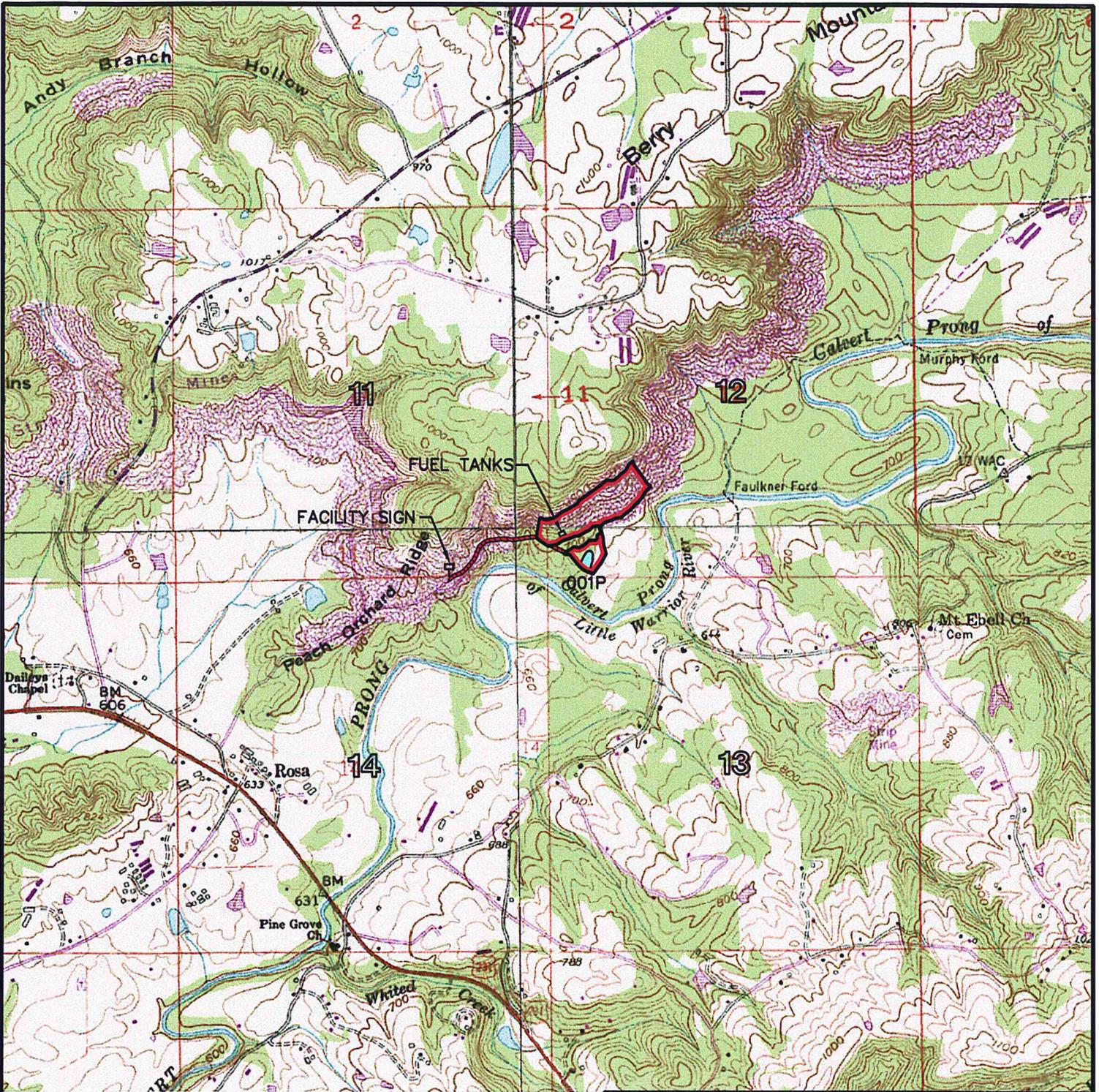
No existing or proposed underground mines are known to exist within 500' of the permit boundary.

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P-

Attachment III-B-2-A

Basin No.	Location Drainage Area	(Acres)
001P	SW 1/4 of SW 1/4, Sec. 12, T. 12 S., R. 1 E.	43

The proposed basin is located in Blount County, Alabama, as found on the Blountsville, Cleveland, Clarence, and Oneonta USGS Quadrangles.



LEGEND

-  PERMIT BOUNDARY
-  SURFACE CONTOUR
-  HAULROAD
-  SEDIMENT BASIN

001P
 NPDES PERMIT NUMBER: (SUBMITTED 8/27/12)
 ISSUANCE DATE: PENDING
 EFFECTIVE DATE: PENDING
 EXPIRATION DATE: PENDING



N.P.D.E.S. PERMIT MAP
TTJ, LLC
Berry Mountain Fines Recovery Operation
Part of Sections 11, 12, & 14
Township 12 South, Range 1 East
Blount County, Alabama

DRAWN BY: G.O.R.	DATE: 9-10-12
DWG. NAME: TTJBMFRONPD-3	
APPROVED BY: J.H.F.	SCALE: 1" = 2000'

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P-

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 1.5 for the normal pool with steady seepage saturation conditions, and a seismic safety factor of at least 1.20.
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.

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P-

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.
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.

Applicant: TTJ, LLC.

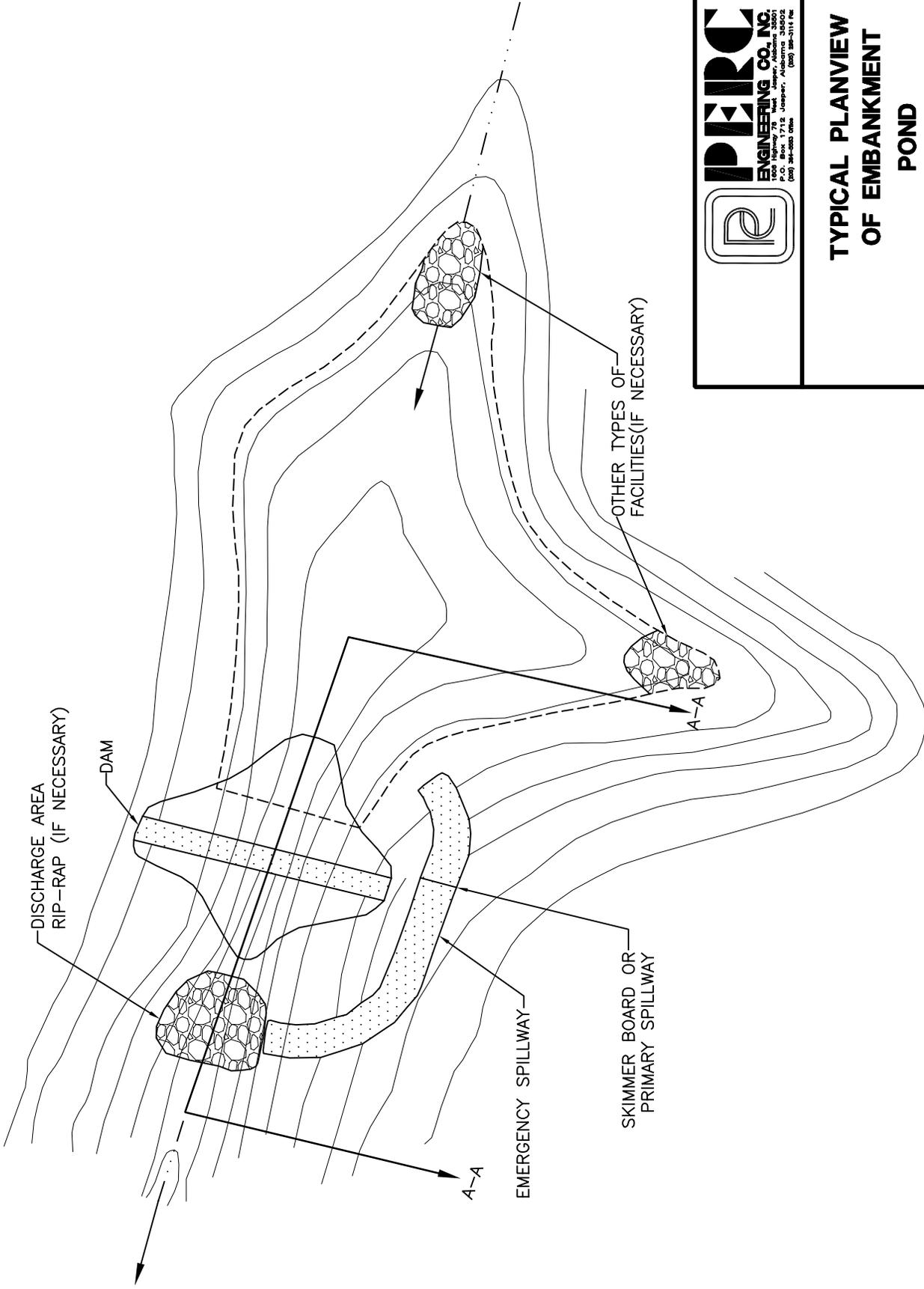
Mine Name: Berry Mountain Fines Recovery Operation

Permit Number: P-

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.
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.

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P-

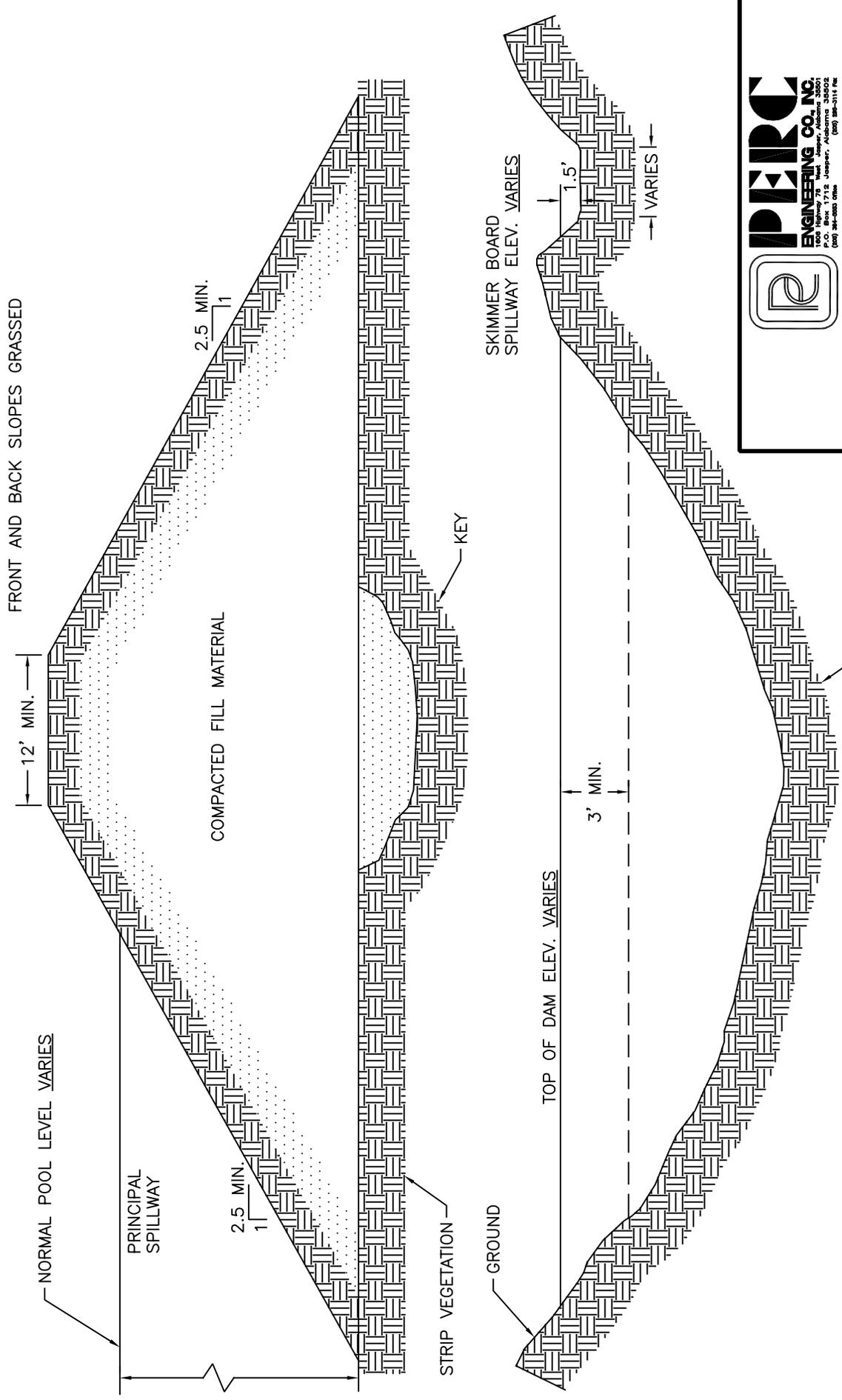
25. A qualified registered professional engineer or other qualified professional specialist, under the direction of the professional engineer shall conduct regular inspections during construction and upon completion shall inspect each basin for certification purposes.
26. Point source discharge embankments 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



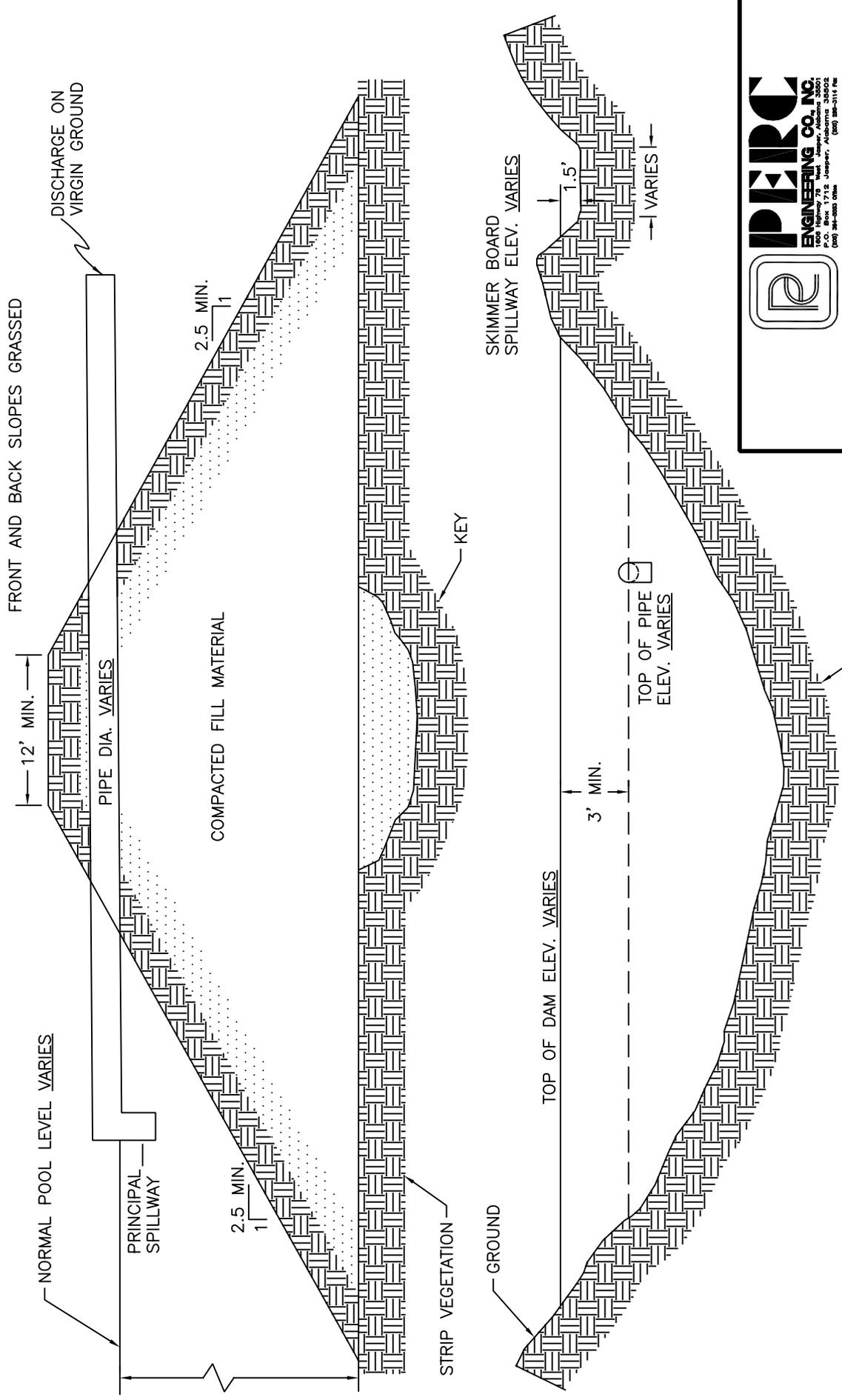
TYPICAL DAM DETAIL
NO SCALE



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

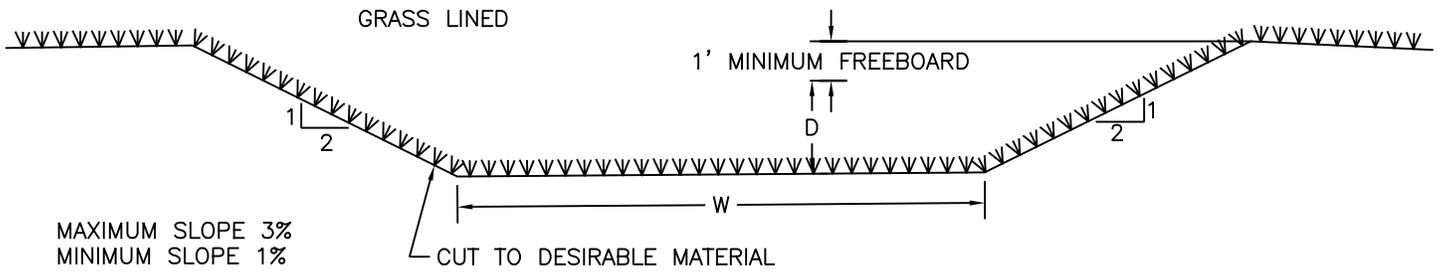


TYPICAL DAM DETAIL

TYPICAL DAM DETAIL
 NO SCALE

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

ATTACHMENT III-B-2-A



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

$N(\text{LOOSE STONE OR GRASS LINED}) = 0.035$
 $A = \text{AREA}$
 $R = \text{AREA/WETTED PERIMETER}$
 $S = \text{SLOPE}$

* 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

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P- 3975

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

See Attachment III-B-3

See Attachment III-B-3, Diversion 1-4 Detailed Design Plans

See Attachment III-B-3, Diversion 5-9 Detailed Design Plans

See Attachment III-B-2(a), Watershed Map for Diversion Location.

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

See Attachment III-B-3

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

None required.

Attachment III-B-3

SPECIFICATIONS FOR DIVERSION CHANNELS
AND DIVERSION BERMS

1. Temporary diversions shall be constructed to pass safely the peak runoff from a 2-year, 6-hour precipitation event.
2. To protect fills and property and to avoid danger to public health and safety, permanent diversions shall be constructed to pass safely the peak runoff from a 10-year, 6-hour precipitation event. Permanent diversions shall be constructed with gently sloping banks that are stabilized by vegetation.
3. Diversions shall be designed, constructed, and maintained in a manner which prevents additional contributions of suspended solids to stream flow and to runoff outside the permit area, to the extent possible, using the best technology currently available. Appropriate sediment control measures for these diversions may include, but not be limited to, maintenance of appropriate gradients, channel lining, revegetation, roughness structures, and detention basins.
4. No diversion shall be located so as to increase the potential for land slides and no diversion shall be constructed on existing land slides.
5. When no longer needed, each temporary diversion shall be removed and the affected land regraded, topsoiled, and revegetated in accordance with Rules 880-X-10C-.10, 880-X-10C-.11, 880-X-10C-.52 - 880-X-10C-.58, 880-X-10C-.60, and 880-X-10C-.62.
6. Channel linings, when slopes are between 1-3 percent shall consist of both perennial and annual grasses and when slopes are greater than 3 percent, shall consist of riprap or be cut into non-erodible material.
7. Freeboard shall provide protection for transition of flows and for critical areas such as swales and curves along the entire channel length.
8. Energy dissipators shall be installed, when necessary, at discharge points where natural streams and exit velocity of the diversion ditch flow is greater than that of the receiving stream.
9. Excess excavated material not necessary for diversion channel geometry or regrading of the channel shall be disposed of in accordance with Rule 880-X-10C-.36.

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P-

10. Topsoil removed from the diversion excavations shall be handled in accordance with Rule 880-X-10C-.07 through 880-X-10C-.11.
11. Diversions shall not be constructed or operated to divert water into underground mines.
12. The embankment or berm foundation area shall be cleared of all organic matter, all surfaces sloped to no steeper than 1v:1h and the entire foundation surface scarified.
13. The entire embankment or berm shall be compacted to 95% density, based on standard proctor as outlined in ASTM.
14. The material placed in the berm 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 as the moisture content of the fill material will permit satisfactory compaction in accordance with paragraph 13.
15. The berm and all disturbed areas shall be seeded with both perennial and annual grasses in order to insure that erosion is minimized. Hay bales or riprap may be placed at the toe of the berm immediately upon completion of construction.
16. All berms shall be examined quarterly for structural weakness, instability, erosion, or other hazardous conditions and maintenance performed as necessary.

4. Disposal of excess spoil. (780.35, 816.71)

Are excess spoil fills proposed?

() Yes (XXX) 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 (XXX) 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.
- 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.

See Attachments III-B-5 for specifications.

See Attachments III-B-5, Primary Road Detailed Design Plans.

See Attachments III-B-5, Primary Road Location Map.

- (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.

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

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P-

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, Attachment III-B-5(b), and Specifications for the construction, maintenance, and reclamation of primary roads.

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P-

**SPECIFICATIONS FOR THE CONSTRUCTION, MAINTENANCE
AND RECLAMATION OF PRIMARY ROADS**

1. Primary roads shall be designed by or under the direction of a registered professional engineer in accordance with the Alabama Surface Mining Commission rules and regulations and prudent engineering practice.
2. Each roadway embankment will be designed and constructed so as to have a minimum static safety factor of 1.3.
3. To the extent possible, roads will be located on ridges or on the most stable available slopes to prevent or minimize erosion, downstream sedimentation and flooding in an effort to prevent adverse effects to fish, wildlife and related environmental values.
4. 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. No fording of intermittent or perennial streams will be conducted unless specifically approved by the Alabama Surface Mining Commission as temporary routes to be used during road construction.
5. Prior to construction, the roadway will be cleared, grubbed and will have the topsoil removed. The clearing limits will be kept to the minimum necessary to accommodate the roadbed and associated ditch construction.
6. Roads will be constructed of suitable compacted subgrade material. The material will be free of sod, roots, stones over 12 inches in diameter, and other objectionable materials. The material will be placed and spread over the entire fill area, starting at the lowest point in layers not to exceed 12 inches in thickness. The material will be compacted to 95 percent of the density, based on standard proctor as outlined in ASTM.

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P-

7. Primary roads will have a minimum width of eighteen feet and a maximum width necessary to accommodate the largest equipment traveling the road.
8. Roadbeds will be cut to consolidated non-erodible material or will be surfaced with durable non-toxic, non-acid forming substances. The wearing surface will consist of durable sandstone, chert, crushed limestone, crushed concrete, crushed asphalt, red rock, ironore refuse, gravel, or other durable non-toxic, non-acid forming material approved by the Regulatory Authority. The wearing surface will be placed on the roadbed to a depth of four inches.
9. No sustained grades will exceed ten percent unless deemed necessary, in which case appropriate sediment control facilities will be constructed. If grades in excess of fifteen percent are required, cross drains, ditch relief drains and road drainways will be located at a minimum distance of three-hundred feet.
10. Roads will be constructed so as to have adequate drainage utilizing ditches, culverts, cross drains and ditch relief drains designed to safely pass the peak runoff from a ten year, six hour precipitation event. Drainage pipes and culverts shall be installed as designed and will be maintained in a free and operating condition to prevent and control erosion at inlets and outlets. Culverts have been designed to support the load of the heaviest equipment to travel the road and are based on the Handbook of Steel Drainage and Highway Construction Products by the American Iron and Steel Institute and the equipment specifications. Drainage ditches will be constructed and maintained in accordance with the approved design to prevent uncontrolled drainage over the road surface and embankment. Roads will not be located in the channel of an intermittent or perennial stream unless specifically approved by the Alabama Surface Mining Commission. Additionally, no relocation and/or alteration of an intermittent or perennial stream will be done unless specifically approved by the Alabama Surface Mining Commission. In the event that it becomes evident that any drainage structures including culverts, bridges and/or low water crossings will be required in order to cross an intermittent or perennial stream, the structure will be designed and constructed in accordance with Alabama Surface Mining Commission requirements and prudent engineering practice and the approval of the design(s) will be acquired prior to the commencement of construction. Hay bale check dams and silt fences will be used at strategic locations when

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P-

necessary to control sediment runoff. Immediately upon completion of construction, the side slopes of the road embankments and/or cuts will be fertilized, seeded with annual and perennial grasses and mulch will be added to aid in the prevention of erosion and to enhance seed germination. The seed mix will consist of, but is not limited to, some combination of the following species: Bermuda grass, fescue, lespedeza, rye grass, brown top millet, clover and vetch. The particular species to be planted will vary with the planting season at the time of seed application. Upon completion of construction of each phase of the roadway the construction will be certified to the Alabama Surface Mining Commission as having been done in accordance with the approved plans for the roadway and associated facilities.

11. Routine maintenance will be required to assure that the road continually meets performance standards and will consist of periodic grading, resurfacing, dust suppression and maintenance of sediment control facilities. Dust suppression will consist of the application of water, chemical binders and/or other dust suppressants. No oil will be utilized in this process. Spot seeding, fertilizing and mulching will be performed as necessary to improve vegetative cover on roadway slopes. A road damaged by a catastrophic event shall be repaired as soon as practicable after the damage has occurred.

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P-

12. Roads not to be retained as part of the post mine land use shall be reclaimed in accordance with the approved reclamation plan for this permit as soon as practicable after they are no longer needed as part of the mining and reclamation operation, using the following procedures:
 - a. The road will be closed to traffic.
 - b. All bridges, culverts and other drainage structures not approved as part of the post mine land use will be removed.
 - c. All road surfacing materials that are not compatible with the post mine land use or revegetation requirements will be properly disposed of on-site or removed from the site for re-use.
 - d. Roadway cut and fill slopes shall be regraded and reshaped to be compatible with the post mine land use and to compliment the natural drainage pattern of the surrounding terrain.
 - e. The natural drainage patterns shall be protected from surface runoff and erosion utilizing the installation of dikes and/or cross drains as necessary.
 - f. The roadbed shall be ripped or scarified as necessary, the topsoil or substitute or approved growing medium shall be replaced and revegetated in accordance with the approved reclamation plan for this permit.

13. The drawings and data contained in the specific design plans illustrate typical roadbed configurations for primary roads as well as site specific design of drainage structures, stability analysis and ditch sections.

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P-

SPECIFICATIONS FOR THE CONSTRUCTION, MAINTENANCE
AND RECLAMATION OF ANCILLARY ROADS

1. To the extent possible, roads will be located on ridges or on the most stable available slopes to prevent or minimize erosion, downstream sedimentation and flooding in an effort to prevent adverse effects to fish, wildlife and related environmental values.
2. 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.
3. Prior to construction, the roadway will be cleared, grubbed and will have the topsoil removed. The clearing limits will be kept to the minimum necessary to accommodate the roadbed and associated ditch construction.
4. Roads will be constructed of suitable subgrade material compacted to ninety-five percent of the standard proctor density and will have a minimum width of ten feet and a maximum width necessary to accommodate the largest equipment traveling the road.
5. Roadbeds will be cut to consolidated non-erodible material or will be surfaced with durable non-toxic, non-acid forming substances. It is anticipated that durable sandstone overburden on site will be utilized as surfacing material. If there should not be adequate sandstone on site, then a durable sandstone material, chert, crushed limestone, crushed concrete, crushed asphalt, red rock, ironore refuse, gravel, or other durable non-toxic, non-acid forming material approved by the Regulatory Authority will be hauled in from off site and placed on the roadbed to a depth of two inches.

Applicant: TTJ, LLC.

Mine Name: Berry Mountain Fines Recovery Operation

Permit Number: P-

6. No sustained grades will exceed ten percent unless deemed necessary, in which case appropriate sediment control facilities will be constructed. If grades in excess of fifteen percent are required, cross drains, ditch relief drains and road drainways will be located at a minimum distance of three-hundred feet.

7. Roads will be constructed so as to have adequate drainage utilizing ditches, cross drains and ditch relief drains. Roads will not be located in the channel of an intermittent or perennial stream unless specifically approved by the Alabama Surface Mining Commission. Additionally, no relocation and/or alteration of an intermittent or perennial stream will be done unless specifically approved by the Alabama Surface Mining Commission. In the event that it becomes evident that any drainage structures including culverts, bridges and/or low water crossings will be required in order to cross an intermittent or perennial stream, the structure will be designed in accordance with Alabama Surface Mining Commission requirements and prudent engineering practice and the approval of the design(s) will be acquired prior to the commencement of construction. Hay bale check dams and silt fences will be used at strategic locations when necessary to control sediment runoff. Immediately upon completion of construction, the side slopes of the road embankments and/or cuts will be fertilized, seeded with annual and perennial grasses and mulch will be added to aid in the prevention of erosion and to enhance seed germination. The seed mix will consist of, but is not limited to, some combination of the following species: bermuda grass, fescue, lespedeza, rye grass, brown top millet, clover and vetch. The particular species to be planted will vary with the planting season at the time of seed application.

8. Routine maintenance will be required to assure that the road continually meets performance standards and will consist of periodic grading, resurfacing, dust suppression and maintenance of sediment control facilities. Dust suppression will consist of the application of water, chemical binders and/or other dust suppressants. No oil will be utilized in this process. Spot seeding, fertilizing and mulching will be performed as necessary to improve vegetative cover on roadway slopes. A road damaged by a catastrophic event shall be repaired as soon as practicable after the damage has occurred.

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P-

9. Roads not to be retained as part of the post mine land use shall be reclaimed in accordance with the approved reclamation plan for this permit as soon as practicable after they are no longer needed as part of the mining and reclamation operation, using the following procedures:
 - a. The road will be closed to traffic.
 - b. All bridges, culverts and other drainage structures not approved as part of the post mine land use will be removed.
 - c. All road surfacing materials that are not compatible with the post mine land use or revegetation requirements will be properly disposed of on-site or removed from the site for re-use.
 - d. Roadway cut and fill slopes shall be regraded and reshaped to be compatible with the post mine land use and to compliment the natural drainage pattern of the surrounding terrain.
 - e. The natural drainage patterns shall be protected from surface runoff and erosion utilizing the installation of dikes and/or cross drains as necessary.
 - f. The roadbed shall be ripped or scarified as necessary, the topsoil or substitute or approved growing medium shall be replaced and revegetated in accordance with the approved reclamation plan for this permit.

10. The following drawings illustrate typical roadbed configurations for ancillary roads.

III-C Blasting Plans

1. Ground vibrations and airblast control

- (a) Check which of the following procedures will be used to limit ground vibration.

___ Maximum Peak Particle Velocity

Distance from Shot to Site	Maximum Peak Velocity
0 - 300 feet	1.25 Inches/Sec.
301 - 5000 feet	1.00 Inches/Sec.
5001 - Beyond	0.75 Inches/Sec.

All shots must be seismographed.

___ Scaled Distance Factor

Distance from Shot to Site	SD Factor
0 - 300 feet	50
301 - 5000 feet	55
5001 - Beyond	65

Seismograph Monitoring is not required.

___ Modified Scale Distance Factor, approval from the Commission is required before this method can be used.

___ Blasting-level chart, approval from the Commission is required before this method can be used.

* Identify the structure used for measuring the scale distance.

Note: No proposed blasting.

Applicant: TTJ, LLC.
Mine Name: Berry Mountain Fines Recovery Operation
Permit Number: P-

- (b) Check which of the following maximum levels and corresponding microphone lower frequency limitation will be used.

105 dB peak - c-weighted - slow response *
 129 dB peak - 6 Hz or lower
 133 dB peak - 2 Hz or lower
 134 dB peak - 0.1 Hz or lower

2. Describe what variations will be made in the blasting operations to control and correct adverse effects due to blasting.
3. Blast Monitoring.
- (a) Describe the blast monitoring equipment to be used (make and model). Will it monitor ground vibrations, air blasts, or both?
- (b) How will monitoring equipment be installed and activated?
- (c) Show the location of blast monitoring stations on the permit map or on a separate map with a scale of 1:24,000 or smaller.

4. Is blasting proposed to be conducted within 500 feet of an active underground mine? () Yes () No

If yes, concurrence from MSHA is required.

5. Will blasting be conducted within 500 feet of an abandoned underground mine or within 1000 feet of an occupied dwelling, church, school, community or institutional building?
() Yes () No

If yes, provide the following information, either as a part of the permit application or at a later date, but before reaching the distance given above. See Attachment III.-C.-5.

- (a) A sketch showing the drill patterns to be used; See Attachment III.-C.-5.
- (b) Critical dimensions, i.e., burden, spacing, stemming, drill hole diameter, etc.; See Attachment III.-C.-5.
- (c) Delay periods; See Attachment III.-C.-5.
- (d) Amount of decking; See Attachment III.-C.-5.
- (e) Type and amount of explosives to be used, including the loading weight (lbs. per foot of drill hole); See Attachment III.-C.-5.
- (f) Location and general description of the structures to be protected; The structures to be protected are those to the southwest and northwest of the permit area (See Permit Map). The structures include mobile homes, wood frame structures and brick veneer structures and concrete block structures.
- (g) Discuss the measures to be used in the blasting operations to protect the public from the adverse effects of blasting; Airblasts will be controlled by maintaining sufficient stemming. Prior to detonation of blasts the blast area will be patrolled, regulated and blocked off by employees to prevent unauthorized entry. Blast warnings will be given prior to each blast and all clear signals will be given after the blast when the blaster in charge determines that to be the case. See Attachment III.-C.-5.- (g)
- (h) The plans are to be prepared and signed by a Certified Blaster. See the sheet preceding the blasting plan.

6. At what times will blasting operations be conducted?

7. Will blasting operations be conducted within 300 feet of an occupied dwelling, church, school, community or institutional building?
() Yes () No