Applicant: Gunner-Reilly, Corp.
Mine Name: Cane Creek Mine
Permit Number: P-

Part II - Environmental Resources Information

A. Fish, Wildlife and Related Environmental Values

1. Describe the measures to be taken, using the best technology currently available to minimize disturbances and adverse impacts to fish and wildlife and achieve enhancement of this resource where practicable within the proposed permit area. [780.18(b), 816.97(a)]

   Sediment ponds will be used to prevent suspended solids and metals from entering nearby watersheds. Other siltation controls such as filter dams and silt fences will be used on occasion when necessary. The area will be promptly reclaimed with diverse species to provide a natural habitat for wildlife closely resembling the premining land use.

2. Describe in detail the measures to be taken to restore or enhance, or steps to be taken to avoid disturbance of habitats or unusually high value for fish and wildlife located within the proposed permit area. [780.18(b), 816.97(d)(2)]

   There are no unusually high value habitats within the proposed permit area.

   See Attachment II.-A.-2.

3. Are there any wetland areas such as streams, lakes, marshes, etc. located in or adjacent to the proposed permit area which will be disturbed by the mining activities? [780.18(b), 816.97 (d)(3 & 4)] ( ) Yes. (X) No.

   If yes, briefly describe the feature(s), it's location and the extent of the proposed disturbance. Describe in detail measures to be taken to restore the area.

   If a stream channel diversion is proposed, describe in detail (including maps, diagrams or cross-sections, if necessary) how the provisions of 816.44(d) will be met. Include a copy of all other necessary State or Federal approvals.

   None Proposed.

Applicant: Gunner-Reilly, Corp.
Mine Name: Cane Creek Mine
Permit Number: P-

Addendum to the Reclamation Plan
Enhancement and Protection of Fish and Wildlife

(1) Areas of Special Concern

(a) Wetlands:

1. List any wetlands, ponds, lakes, streams, rivers, etc. that have been identified by the Department of Conservation and Natural resources (DCNR) or U.S. Fish and Wildlife Service (USFWS) as area of special concern.

   As shown within the correspondence from the Mr. Larry Goldman from the USFWS, wetlands do exist within the proposed permit area. These wetlands consist of open strip pits created as a result of previous mining.

2. Identify and direct or indirect impacts which could occur as a result of the proposed mine.

   If mining and reclamation operations are successfully completed, there should be no direct impacts on areas of special concern.

   Indirect impacts as a result of this mining operation, will be limited to the temporary changes in the quantity of water entering the receiving streams during the construction of diversions and sediment basins, sediment load during the construction of incidental areas such as diversions, sediment basins, haulroads, etc. and the temporary destruction of small insignificant and undected water holding depressions during mining operations.

3. List the measures to be taken to avoid, protect, or minimize impacts.

   All required buffer zones or setbacks, as set forth in the regulations, will be honored to avoid, protect, and minimize impacts of areas of special concern. Sediment basins will be utilized to maintain water quality standards entering the receiving stream. Diversion ditches will be constructed to control and direct all disturbed runoff through approved sediment basins. Hay dams, silt fences and rock check dams will be used to control minimal offsite drainage, such as haulroads, out slopes of sediment basins, etc., not entering sediment basins. Disturbed areas will be regraded and revegetated in a timely manner, as outlined in Part IV of the permit, to provide fish and wildlife habitat closely resembling premining conditions, where applicable.

4. If direct or indirect impacts are unavoidable, describe in detail the measures to be used to restore the area to pre-disturbance conditions and to enhance it.

The temporary destruction of small, insignificant, and undected water holding depressions during mining operations will be restored during the reclamation process by regrading the mined area in such a manner as to create numerous small water holding depressions approximately 1/4 acres in size of maximum depth of 2 feet to enhance the area for fish and wildlife.

When approved by the landowner, sediment basins will be left as permanent water impoundments to provide watering for wildlife and fish habitat.

5. Is any disturbance of wetland areas proposed which requires approval of the U.S. Army Corps of Engineers?
(XXX) Yes ( ) No

If Yes, provide necessary written approval.

(b) Endangered/Threatened Species and Critical Habitats:

1. Identify any endangered or threatened plant or animal species or their critical habitat which will be directly or indirectly impacted by the proposed mining operation.

No endangered to threatened plant or animal species or their critical habitat exists within the proposed permit area which will be directly or indirectly impacted by the proposed mining operation.

2. Describe the potential impact on any endangered or threatened plant or animal species or their critical habitat within the proposed permit or adjacent areas.

No endangered or threatened plant or animal species or their critical habitat exists within the proposed permit or adjacent areas which will be directly or indirectly impacted by the proposed mining operation.

3. Describe in detail the measures which will be taken to prevent any adverse impact on any endangered or threatened plant or animal species or adjacent area.

No endangered or threatened plant or animal species or their critical habitat exists within the proposed permit or adjacent areas which will be directly or indirectly impacted by the proposed mining operation.

(c) Other Areas of Special Concern:

1. Identify the area of special concern:

No other areas of special concern were listed by the USFWS, the DCNR, or the Alabama Heritage Data Base.

2. Describe the potential impact on any other areas of special concern.

No other areas of special concern were listed by the USFWS, the DCNR, or the Alabama Heritage Data Base.

3. Describe in detail the measures which will be taken to prevent any adverse impact on any other areas of special concern or any endangered or threatened plant or animal species or their critical habitat within the proposed permit or adjacent areas.

No endangered or threatened plant or animal species or their critical habitat exists within the proposed permit or adjacent areas which will be directly or indirectly impacted by the proposed mining operation.

No other areas of special concern were listed by the USFWS, the DCNR, or the Alabama Heritage Data Base.

(2) General Provision for Enhancement and Protection of Fish and Wildlife

(a) Describe those measures which will be taken during the active mining phase of the operation to minimize or prevent impacts to fish and wildlife.

All required buffer zones or setbacks, as set forth in the regulations, will be honored to avoid, prevent and minimize impacts of areas of special concern. Sediment basins will be utilized to maintain water quality standards entering the receiving stream(s). Diversion ditches will be constructed to control and direct all disturbed drainage through approved sediment basins. Hay dams, silt fences and rock check dams will be used to control minimal offsite drainage, such as haulroads, out slopes of sediment basins, etc., not

entering the sedimentation basins. Disturbed areas will be regraded and revegetated in a timely manner, as outlined in Part IV of this application, to provide fish and wildlife habitat closely resembling premining conditions, where applicable.

(b) Describe the measures to be implemented during the reclamation process to enhance fish and wildlife.

1. During reclamation of the permit area, the disturbed area may be regraded in such a manner as to create small water holding depressions approximately 1/4 acre in size of maximum depth of 2 feet to enhance the area for fish and wildlife.

2. All sediment basins, if approved by the ASMC and the land owners, will be left as permanent water impoundments to provide watering for wildlife and fish habitat.

3. Various herbaceous species including, but not limited to, Kobe Lespedeza, Vetch, Sericea Lespedeza, Millet, and Ryegrass may be planted in scattered and random locations to provide food and cover for wildlife that closely resemble pre-mining condition. These plants will be added in addition to the vegetation proposed in Part IV of this permit application.

4. As determined by the post mining land use of the permit area, all reclaimed areas greater than fifty (50) acres may be broken up by vegetation types to provide maximum variation of vegetation. The proposed post mining landuse for the permit area consists of undeveloped or no current landuse. In this instance, areas along drainage courses, areas along the permit boundary, and areas around the proposed water holding depressions to be left in the regrading process may be planted with trees and shrubs, such as willow, loblolly pine, autumn olive, sawtooth oak, etc., to increase diversity of food and cover for wildlife.

If a stream channel diversion is proposed, describe in detail (including maps, diagrams or cross-sections, if necessary) how the provisions of 816.44(d) will be met. Include a copy of all other necessary State or Federal approvals.

None Proposed.

4. Is fish and wildlife habitat to be primary or secondary post-mining landuse? [780.18(b)(5)] ( ) Yes (X) No.

   If yes, describe in detail the post-mining measures to be taken to attain this land use including the target specie(s) of wildlife, plant species to be used and a map delineating the proposed arrangement of plant groupings and water sources on the permit area following reclamation.

5. If the pre-mining land use is fish and wildlife habitat and the proposed post-mining land use is cropland, describe the post-mining provisions to be made for wildlife. Attach a map showing the location of trees, hedges, or fence rows to be used to diversify habitat types, if appropriate. [780.18(b)(5)]

   Not applicable.

6. If the post-mining land use is to be residential, commercial or industrial, describe the post-mining provisions to be made for wildlife such as greenbelts, trees, or hedgerows composed of plant species useful for wildlife. [780.18(b)(5)]

   Not applicable.

7. If any exceptions to Section 816.117(c)(1-3) are proposed, describe in detail the proposed practice including target species of wildlife, plant species to be used, planting rate and/or stocking density, planting pattern with appropriate map and anticipated results of the proposed practice.

   None proposed.

Applicant: Gunner-Reilly, Corp.
Mine Name: Cane Creek Mine
Permit Number: P-

B. Cultural, Historical and Archaeological Resources

1. Describe and identify any cultural or historical resources located in or adjacent to the proposed permit area which are listed on the National Register of Historic Places. Delineate the location of the resources on the permit map. Describe in detail the measures to be taken to minimize or prevent adverse impacts on the resource(s). (779.12, 780.14, 780.31)

   See attached SHPO Concurrence.

2. Describe and identify any known significant archaeological sites located in or adjacent to the proposed permit area. The description shall be based on all available information including, but not limited to, data of State and local archaeological agencies. Delineate the site(s) on the permit map. (779.12, 780.14)

   See attached SHPO Concurrence.

C. Threatened and Endangered Species

Identify any threatened or endangered species of plants or animals or critical habitats of such species located in or adjacent to the proposed permit area. Delineate the location of the specie(s) or habitat(s) on the permit map. (780.14)

See Attachment II.-A.-2.

Applicant: Gunner-Reilly, Corp.
Mine Name: Cane Creek Mine
Permit Number: P-

D. Lands Unsuitable For Mining

1. Are there any areas located in or adjacent to the proposed permit area which have been designated unsuitable for mining or are under study for such designation in an administrative proceeding?(778.16)
( ) Yes. (XXX) No.

If yes, give the name(s) of the area(s), if known. Delineate the area(s) on the permit map. (780.14)

2. Describe in detail the measures to be taken to minimize or prevent adverse impacts on any public park. (780.31)

There are no public parks in or adjacent to the permit area.

3. Are request for waivers included in this application? (761.12)
( ) Yes. (XXX) No.

4. Do you claim exemption to this part based upon:

(a) Operations existing on the proposed permit area on August 3, 1977; or

(b) Operations subject to valid existing rights on August 3, 1977; or

(c) Substantial legal and financial commitments made prior to January 4, 1977? [762.13, 778.16(b)]

( ) Yes. (X) No.

If yes, give reason(s) for the claim with appropriate documentation.

Applicant: Gunner-Reilly, Corp.
Mine Name: Cane Creek Mine
Permit Number: P-

E. Geology (779.13) See Attachment II-E

1. Give a description of the geology within the proposed permit area including, but not limited to, the logs of drill holes, or a description of a highwall, with thicknesses of overburden and coal down to the first aquifer to be affected below the lowest coal seam to be mined to identify acid-forming or toxic-forming zones.

2. Chemical analysis conducted to identify acid-forming or toxic-forming zones shall be made on a representative number of samples of the overburden within the permit area. Sampling of the overburden may be collected at five foot intervals from a lithologic unit or from the entire thickness if the unit is less than 5 feet thick, when the lithology is below the oxidized zone; from the oxidized zone one composite sample shall be collected and analyzed. Samples may be taken from drill holes or from channel samples from a highwall.

3. Analysis of each overburden sample shall be run for total sulfur. If the sulfur content is one percent or greater, it is recommended that additional analysis be run for pyritic sulfur. From a composite sample of each drill hole or channel sample of the highwall, neutralization potential analysis shall be run and the acid-base account calculated using the average of the sulfur content for the sampling location. Results shall be included in the permit application.

4. Total sulfur analysis of the coal seam(s) to be mined shall be run and reported with the permit application.

5. The name, depth, thickness, strike and dip of the coal seam(s) to be mined shall be included in the permit application.

6. Location of the coal crop line(s) within the proposed permit area are to be shown on an appropriate map.

7. All necessary maps and cross-sections needed to support the geologic description shall conform with the requirements of Section 780.10(b).

8. When used to collect information for the permit application, elevations and locations of test borings, core samples or other sample sites shall be provided(topographic map accuracy is adequate).

F. Groundwater Hydrology (779.13) See Attachment II-F.

The permit application shall contain a description of the groundwater hydrology within the proposed permit area and potentially impacted off-site areas. In obtaining the necessary base line or pre-mining information, the applicant should be guided in conducting the studies by the availability and usage of groundwater in the potentially impacted off-site areas with particular emphasis being placed on those locations where present or potential future usage of groundwater is of local importance. The description should be based on a comprehensive survey of existing water wells and springs that may be affected by the proposed mining operations or from wells drilled by the applicant. Information addressed in the survey shall include:

(1) Static elevation of the groundwater.

(2) Elevation and depth below the surface of any aquifer(s) or water table encountered.

(3) The lithologic description and thickness of any aquifer(s) encountered.

(4) Results of aquifer test(s), if conducted, shall be reported identifying the transmissivity, draw down, recovery rates, and specific capacity.

(5) Known uses of the groundwater such as light industrial, agricultural, domestic, etc. estimating the approximate amount of water used per day.

(6) Quality of the groundwater should be determined using sampling and laboratory techniques cited in Section 779.13(d)(4) or equally reliable methods to determine at a minimum:
(I) pH;
(ii) Total iron, mg/l;
(iii) Total manganese, mg/l;
(iv) Total dissolved solids or specific conductance at 25° C if the latter can be shown as a direct relationship with total dissolved solids.

(7) Describe any geological structures including their orientation that will have an affect on the movement of the groundwater in the aquifer such as:
(I) Joint systems;
(ii) Faults or fault zones;
(iii) Folds;
(iv) Cleats in the coal; and
(v) Bedding planes.

(8) Appropriate maps and cross-sections needed to supplement the description of the groundwater hydrology shall conform with the requirements of Section 780.10(b).

Applicant: Gunner-Reilly, Corp.
Mine Name: Cane Creek Mine
Permit Number: P-

G. Surface Water Hydrology (779.13) See Attachment II-G.

The permit application shall contain information and a description of the surface water that will flow into or from the proposed permit area in a form and to a degree that will describe seasonal variations in both quantity and quality of the surface water within the proposed permit area and potentially impacted off-site areas. The pre-mine or base-line study should be designed to a level that takes into consideration water availability and present and potential future usage of the surface water. The period of time for which such a survey should be conducted is flexible, but should be adequate to properly evaluate low flow and high flow conditions based on either site specific studies, or where available, from existing data files which are reasonable and statistically representative of the proposed permit and potentially impacted off-site areas. At a minimum the submitted information on the surface water hydrology shall include:

1) Name of the water shed(s) which will receive discharge from the proposed permit area.

2) The location of any surface water bodies such as streams, lakes, important impoundments or springs that may be adversely affected by the proposed mining operations.

3) Known use of the surface water leaving the proposed permit area (or that will receive discharge from it), if any.

4) Water quality data shall be submitted to identify seasonal flow characteristics of, at a minimum:

(I) pH;
(ii) Total iron, mg/l;
(iii) Total manganese,mg/l;
(iv) Total suspended solids;
(v) Total dissolved solids or specific conductance at 25°C if the latter can be shown to have direct relationship with the total dissolved solids;
(vi) Base-line acidity information shall be provided if the need for acid neutralization is anticipated for the proposed mining operation or if required by the regulatory authority.

5) Water sampling and analytical methods listed in the references cited in Section 779.13(d)(4) or their equivalent should be used. Standard Methods For The Examination of Water and Wastewater.

6) When modeling or other simulation methods are employed to evaluate the affects of mining on the hydrologic regime both on and off the proposed permit area, representative seasonal precipitation data shall be reported.

7) The location of monitoring stations used to collect data for the permit application should be shown on a map which conforms to the standards of Section 780.10(b).

H. Determination of the Probable Hydrologic Consequences (779.13)

See Attachment II-H.

The permit application shall contain a determination of the probable hydrologic consequences (PHC). The probable hydrologic consequence is a prediction of possible adverse affects of the proposed surface mining and reclamation activities upon the quantity and quality of surface and groundwater systems both on and off the proposed permit area and is based upon the results and findings of the base-line or pre-mining geologic and hydrologic studies. The assessment may be based upon site specific studies or from representative data that can be transferred or can be made to simulate the condition at the proposed permit and off-site areas.

1) Specifically, the PHC prediction shall include an estimate of the impact of the mining and reclamation operations upon the dissolved and suspended solids, total iron, total manganese and pH of the surface and ground water.

2) In the event it is determined that off-site water quantity cannot be protected from adverse affects of the proposed surface mining operations, the applicant shall identify an alternative source of water supply of at least equal quality and quantity that can be developed to replace the existing one.

Applicant: Gunner-Reilly, Corp.
Mine Name: Cane Creek Mine
Permit Number: P-3952

I. Land Use Information

1. Describe in detail the land use(s) existing at the time of the application. Give the number of acres and describe sufficiently so the areas can be identified on a map. If necessary, include a map showing land use units. (779.22)

   100 acres undeveloped, no current land use
   65 acres previously disturbed
   10 acres impounded water

2. Give the applicable land use classification under local law, if any. (779.22)

   Not Applicable

3. Is any of the area prime farmland? (779.27,785.17)

   ( ) Yes (XXX) No

   If yes, submit the information required in Section 785.17.

   If no, show or state how the determination was made.

   See Attachment II-I-3.

4. Has the land use of any area on the proposed permit area changed within the last 5 years? (779.22)
   ( ) Yes (XXX) No

   If yes, identify those areas and describe their historic use.

5. Has any area within the proposed permit been previously mined?(779.22) (XXX) Yes ( ) No

   If yes, complete the following:

   a) Describe the area or shown on a map.

      See Permit Map

   b) Was the area reclaimed? ( ) Yes (XXX) No

      If yes, under what Law? ( ) 1969 ( ) 1975 ( ) Interim Law

   c) Describe the land use of the area prior to any mining, or if this cannot be determined, describe the land use(s) of surrounding unmined land. (779.22)

      The historic landuse of the previously mined areas was undeveloped, no current land use.

Applicant: Gunner-Reilly, Corp.
Mine Name: Cane Creek Mine
Permit Number: P-

6. Describe in detail, land uses of areas adjacent to the proposed permit area. (779.22)

Areas adjacent to the permit area are both residential and undeveloped, no current land use.

7. Discuss the capability of the lands within the permit area to support a variety of land uses other than the current use. (779.22)

MAP SYMBOL	SOIL NAME	CORN	SOYBEANS	TALL FESCUE
BPE	Brilliant & Palmerdale extremely chanery loams 6 to 60 % slopes	----	----	----
Ste	Sunlight-Townley Complex 15 to 45 % slopes	----	----	3.5*
NaE	Nauvoo-Townley Complex 4 to 20% slopes	----	----	4.0*
McE	Montevallo chanery silt loam 3 to 60% slopes	----	----	6.5*
ToD	Townley silt loam 6 to 15 % slopes	----	----	6.0*

----: Not Rated
* : Animal-Unit -Month

Map Symbol	Soil Type	Site Index	Species
BPE	Brilliant & Palmerdale extremely chanery loams 6 to 60% slopes	85	Loblolly Pine
Ste	Sunlight-Townley Complex 15 to 45 % slopes	70	Loblolly Pine
NaE	Nauvoo-Townley Complex 4 to 20% slopes	85	Loblolly Pine
McE	Montevallo chanery silt loam 3 to 60% slopes	70	Loblolly Pine
ToD	Townley silt loam 6 to 15% slopes	80	Loblolly Pine

Applicant: Gunner-Reilly, Corp.
Mine Name: Cane Creek Mine
Permit Number: P-

J. Vegetative Information

Delineate on a map, or describe in detail, the existing plant communities within the proposed permit area (and adjacent areas, if required). List the predominate overstory, understory, and ground cover species (use common name only). Give approximate acreage covered by each plant community and approximate age of timber stands. (779.19)

The proposed permit area consists of two distinct areas with different vegetative communities. Areas which have been previously disturbed have no appreciable overstory, however some individual specimens estimated to be in excess of 25 years do exist. Species existing in previously disturbed areas include cotton wood, sycamore, mimosa, and willow. Ground cover in these areas consists mostly of honey suckle, blackberry, tall fescue, lespedeza, siclepod, broom sedge, crabgrass, and kudzu. Areas which are undeveloped contain the following species as overstory: mostly Virginia and Buttermilk pine up to approximately 30 years in age, and to a lesser extent, sweetgum, hickory, poplar, red oak, and beech. Some areas are clear cut. Understory is thick and consists mainly of younger overstory species mentioned above. Ground cover consists mainly of dead leaves, saw briar, green briar, and blackberry.