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April 21, 2014

Via Electronic Mail and U.S. Mail

Russell A. Kelly
Chief, Permits and Services Division
Alabama Department of Environmental Management
1400 Coliseum Blvd.
Montgomery, AL 36110-2059

RE: Draft NPDES Permit No. AL 0082066 – White Rock Quarries, LLC

Dear Mr. Kelly:

The Southern Environmental Law Center (“SELC”) submits the following comments on behalf of Coosa Riverkeeper, Inc., regarding the above-referenced draft National Pollutant Discharge Elimination System (“NPDES”) permit. SELC is a regional nonprofit legal and advocacy organization that works to protect the natural resources and special places in the Southeastern United States. Coosa Riverkeeper is a nonprofit river conservation group whose mission is to protect, restore and promote the Coosa River in Alabama on behalf of its 444 members and the general public that uses and enjoys the river. Many of these members will have their interests in the river affected by the above-referenced permit, including 38 members that live in Vincent, Alabama. We appreciate the extra time that has been given to submit comments concerning this permit.

White Rock Quarries, LLC (“White Rock”) proposes to construct and operate a 974-acre limestone quarry for a period of nearly 100 years at a site in Vincent, Alabama. NPDES Individual Permit application at 3. The quarry site is not far from the main stem of the Coosa River at Lay Lake. We have a number of concerns about the discharges that would be authorized by this NPDES permit, which will significantly impact the Coosa River and several of its tributaries. For the reasons discussed below, this permit violates the Clean Water Act and the Alabama Water Pollution Control Act and should not be issued as drafted. At minimum, Outfall 002 should not be permitted, Outfall 001 should be relocated downstream on the Coosa River, and the permit should include stringent and enforceable limits for sediment and flow.

Receiving waters

The stretch of the Coosa River that will receive the discharge from Outfall 001 is relatively high-quality in terms of its current pollution levels and its existing populations of aquatic life. Spring Creek is a large, clear, free-flowing stream with a rocky bottom at the point where it joins with the unnamed tributary that will receive the discharge from Outfall 002. That

unnamed tributary is presently subject to periodic flooding, but has a low base flow under normal rainfall conditions.¹ According to calculations based on the tributary's watershed size and data from a nearby U.S. Geological Survey ("USGS") stream flow gage, we estimate that the unnamed tributary's present flow averages 0.3 million gallons per day ("MGD").² Outfall 002's discharge will flow into Spring Creek, which joins with the Coosa River above the proposed discharge point for Outfall 001. Photographs of this tributary, including its confluence with Spring Creek, are attached as Exhibit 1-4 and described in the index following these comments.

The quarry site includes property that lies within the designated 100-year floodplain, as well as property that contains freshwater forested/shrub wetlands and hydric soils. Freshwater forested/shrub wetlands, as well as freshwater emergent wetlands, lie downstream of multiple proposed outfalls. Maps of the site along with these features are attached as Exhibits 5-10. They have been assembled using publicly-available data from relevant state and federal agencies, and we ask that they be considered in conjunction with these comments. Furthermore, an attached 2009 study of the White Rock site by Kendrick Geologic Associates noted numerous sinkholes, both on-site and in the surrounding vicinity. *See* Exhibit 11. Maps derived from USGS and Geological Survey of Alabama data, also attached, confirm the presence of sinkholes on and near the site. *See* Exhibits 12-13.

The Coosa River at Lay Lake is designated for Public Water Supply, Swimming and Other Whole Body Water-Contact Sports, and Fish and Wildlife. Lay Lake is heavily used for boating, swimming, and other recreation, and the Shelby-Talladega Water Treatment Plant is located on the lake downstream of Outfall 001. The other receiving waters are designated Fish and Wildlife. *See* Ala. Admin. Code §335-6-11.

The Clean Water Act's regulations, which are binding upon ADEM, mandate that NPDES permits include conditions that will prevent pollutants from causing or contributing to violations of state water quality standards, including both numeric and narrative criteria. 40 C.F.R. § 122.44(d)(1). ADEM regulations establish criteria applicable to all state waters, which include the requirement that water quality not cause a waterway's best usage to be "adversely affected" by a given discharge. Ala. Admin. Code § 335-6-10-.05(1). All state waters shall also be free from industrial wastes that form "bottom deposits" that "interfere directly or indirectly with any classified water use." Ala. Admin. Code § 335-6-10-.06(a).³ All waters must also be free from "floating debris" associated with industrial waste that "interfere[s] directly or indirectly with any classified water use." *Id.* at § 335-6-10-.06(b). Finally, all waters must be free from industrial waste that has "toxic or harmful" effects on "human, animal or aquatic life to the extent commensurate with the designated usage of such waters." *Id.* at § 335-6-10-.06(c). For all three designated uses that are relevant here, the standard for turbidity is as follows:

¹ Frank Chitwood, personal observation based on visit to property adjacent to quarry site and downstream from Outfall 002, with permission from property owner, March 24, 2014. The property owner confirmed that the stream can flood after significant rainfalls.

² This number was obtained using a drainage area weighted stream flow method. Data for the analysis is based on the USGS Stream Gage Station 02407514 at Yellowleaf Creek near Westover, AL.

³ "Industrial wastes" are defined specifically to include wastes resulting from "the development of natural resources." *Id.* at § 335-6-10-.02(4).

Turbidity: There shall be no turbidity of other than natural origin that will cause substantial visible contrast with the natural appearance of waters or interfere with any beneficial uses which they serve. Furthermore, in no case shall turbidity exceed 50 Nephelometric units above background. Background will be interpreted as the natural condition of the receiving waters without the influence of man-made or man-induced causes. Turbidity levels caused by natural runoff will be included in establishing background levels.

Ala. Admin. Code §§ 335-6-10-.06(2)(e)(9) (Public Water Supply); 335-6-10-.06(3)(c)(8) (Swimming and Other Whole Body Water-Contact Sports); 335-6-10-.06(5)(e)(9) (Fish and Wildlife).

The Coosa River at Lay Lake is the subject of a Total Maximum Daily Load (“TMDL”) for nutrients, oxygen enrichment/dissolved oxygen, and pH.⁴

Inadequate Sediment Limits

The draft permit includes numeric concentration limits for Total Suspended Solids (“TSS”): a monthly average of 25.0 mg/L, with a daily maximum of 45.0 mg/L. Draft permit at I.A.1-3, pp. 4-5. There is no numeric limit for any other parameter related to sediment pollution, such as Total Dissolved Solids (“TDS”), settleable solids, etc., nor is there any limit on the total quantity of sediment that can be discharged. Based on ADEM’s own data, the current average concentration of sediment in the Coosa River downstream of Outfall 001 is 10.0 mg/L. The current average concentration of sediment in Outfall 002’s receiving stream is 16.0 mg/L. The numeric limits in the permit will allow significantly higher concentrations of sediment to be discharged into the Coosa River and Spring Creek in particular.

Sediment will be the predominant pollutant discharged from the quarry site and is the leading cause of water pollution in Alabama. The permitted sediment loading in Spring Creek will be highly damaging, with an increase in ambient concentration from 16.0 mg/L to 24.0 mg/L. The permit allows an estimate of 625 pounds of sediment to enter the Coosa River and/or Spring Creek daily, via Outfalls 001 and 002. This translates into an addition of 228,125 pounds of sediment per year and 1,140,625 pounds of sediment over the permit’s five-year life span. Given the current size, flow, and quality of the tributary that will receive Outfall 002’s discharge, such sediment will interfere with its Fish and Wildlife use classification and also violate the general criteria applicable to all Alabama waterways discussed above. The Coosa River will also be receiving sediment discharge from Outfall 001 in an area known to provide habitat for federally-protected species and upstream of a major drinking water intake. Sedimentation in Lay Lake will have economic impacts in terms of reduced hydropower generation capacity, reduced flood control capacity, and reduced recreational and aesthetic opportunities. This quarry runoff

⁴ See ADEM, “Final Coosa River Basin TMDLs, October 2008.” Available at <http://adem.alabama.gov/programs/water/wquality/tmdls/FinalCoosaLakesTMDLReport.pdf> <last visited April 14, 2014>.

must be far less concentrated with sediment in order to avoid violations of water quality standards.

The sediment runoff numbers above do not even include the sediment-laden stormwater that will leave the site during rain events. During a 2-year rainfall event, an estimated 162 tons of sediment will be discharged. This number rises to 249 tons of sediment during a 10-year storm. The dramatic increase in sediment input will damage existing aquatic habitat and affect physical stream characteristics in Spring Creek and its tributaries, Locust Creek and its tributaries, and the Coosa River. These changes will result in violations of the water quality standards described above.

ADEM cannot issue this permit without adding more protections against sediment pollution. The TSS limits in the permit should be revised downward to be more in line with current ambient concentrations, or the sediment will cause or contribute to a violation of water quality standards in contravention of state and federal law. As discussed below, these limits should also be tied to flow limits to prevent overloading of the receiving waters.

ADEM states that the TSS limits in the draft permit “have been shown to be protective of water quality.” NPDES Individual Permit Rationale at 2. This statement has no justification. When we subsequently asked ADEM to provide a justification for this point, Jeff Kitchens responded that “we have no 303(d) listed streams or approved TMDLs in Alabama for siltation impairments as a result of current compliant quarry operations.” Email from Jeff Kitchens, ADEM, to Gil Rogers, SELC, March 21, 2014. ADEM currently monitors less than 10% of streams and rivers in Alabama and does not monitor the specific tributaries that will receive the discharges from White Rock Quarry Outfalls 002-028. ADEM also lacks the funding to pursue rigorous monitoring or implement existing TMDLs. Therefore, the mere absence of a formal impairment designation for a particular stream – especially one that is not monitored by ADEM – does not mean that the stream would not be adversely affected by TSS discharges.

Lack of Flow Limits

The improperly high sediment limits become even more concerning in light of the draft permit’s absence of any limits for flow. This means that the site could discharge limitless quantities of sediment-laden wastewater, provided that the concentration per liter never exceeded the permit limits. This will directly and cumulatively impact the receiving waters for the permit.

The flow effects in Spring Creek and its tributaries in particular will result in physical alteration of the streams. These streams will be scoured, widened, deepened, and eroded by the sheer volume of water being discharged from Outfall 002, which the permit applicant has estimated will be 3.0 MGD, each day of the year. Permit application at 6. This is ten times the current flow, and the equivalent of 4.5 inches of rain falling in the watershed every day of the year.⁵ ADEM cannot issue a permit that will cause such dramatic alteration, which in turn will violate the water quality criteria discussed above.

⁵ This amount of rain is between a 2-year and 5-year rainfall, occurring every day. This number was calculated using the watershed size, soil data, land use data, and measurements of stream width and depth according to the SCS method.

In addition to the discharge's impacts on water quality, stream habitat, and physical stream characteristics, the discharge from Outfall 002 will likely result in flooding of properties downstream of the outfall. Furthermore, the receiving tributary is culverted in at least one place on private property, and even in the absence of a rain event the volume of this discharge will overwhelm the existing culvert, which was constructed based on the stream's current flow patterns. ADEM cannot issue an NPDES permit that will infringe on downstream property rights in this way.

Because of Outfall 002's impacts on receiving waters, it should not be permitted at all. ADEM cannot assume that a relatively small tributary can absorb the same discharge as the Coosa River. Furthermore, the applicant ought to be able to take the relatively short time needed on the front end to construct Outfall 001 before commencing a century-long operation of the quarry. There is no need to permanently damage a stream via Outfall 002 in this case.

Furthermore, if ADEM elects to authorize any discharges from this quarry, it should either place limits on flow for Outfall 001 in order to avoid harming three federally-protected species described below (or their habitat), or require White Rock to relocate Outfall 001 downriver of the public water supply intake and the threatened and endangered species. All three of the species are sensitive to sediment pollution.

Flawed Antidegradation Analysis

ADEM's antidegradation policy allows for waterways that currently exceed the quality necessary to support their existing uses to be impacted by new or increased pollution discharges. In such cases, "water quality adequate to protect existing uses *fully* shall be maintained." Ala. Admin. Code § 335-6-10-.04(3). This so-called antidegradation analysis requires a showing from the permit applicant that alternatives to the discharge are not feasible and that the discharge is "necessary" for important economic or social development. *See id.* The applicant's current antidegradation analysis is sorely lacking, and ADEM should deny the permit on this basis alone.

While White Rock's discussion of the project's *benefits* is meticulously detailed as to estimated tax revenues, employment projections, Christmas tree funds, etc., its summary dismissal of alternatives is meager at best. *Compare* Permit Application Attachment XVII *with* Attachment XVIII. ADEM should demand a more rigorous showing from the applicant before making a final decision about this permit, particularly since this quarry is going to impact waterways for the next century.

One alternative noted above would be to construct Outfall 001 before commencing quarry operations, so as to remove the need for Outfall 002. Outfall 001 could also be relocated further downriver on the Coosa, south of Buzzard Island and closer to the existing paper mill on the west side of the Coosa. This relocation could be done largely using existing rights-of-way (e.g. Creswell Road, or the railroad track running to the paper mill). While water quality would still be impacted, this location would occur downstream of known endangered and threatened species populations, and downstream of the Shelby-Talladega Water Treatment Plant.

The permit applicant has not shown that any of these options have been pursued, nor has it shown that these options are not feasible. The only “discussion” concerning relocation is a bare statement that there are “no known benefits” to relocating the discharge and that moving the pipeline *anywhere* other than its current route “would clearly increase the costs of the capital project for the proposed discharge by more than 110 percent.” No justification is given for either of these statements. Aside from the benefits discussed in the preceding paragraph, Spring Creek would benefit tremendously from not receiving 10 times its typical flow every day for a year. And the costs of constructing a slightly longer pipeline for Outfall 001 would not necessarily entail any cost increase approaching 110 percent of the project’s estimated capital costs.

The location of the fuel farm must also be addressed in the antidegradation analysis. The fuel farm is proposed to be located in sensitive areas that include both floodplain and hydric soils, and it will be near a known sinkhole. ADEM should not issue a permit allowing for discharges associated with this configuration.

Inadequately-Sized Sediment Ponds

At least five of the proposed sediment ponds must be enlarged – some of them significantly – in order to satisfy the requirements of the permit applicant’s own commitments as laid out in its Pollution Abatement/Prevention Plan (“PAP plan”). According to the PAP plan, Best Management Practices (“BMPs”) will be installed and maintained in accordance with the Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas (“Alabama Handbook”).⁶ The Alabama Handbook in turn requires sediment ponds to be sized with a minimum volume of 3,600 cubic feet of storage per acre of drainage area.⁷ According to this criterion, and comparing the drainage areas of each outfall to the minimum storage volume of the sediment pond associated with that outfall, Outfalls 008, 017, 024, 027, and 028 have undersized sediment ponds. Outfall 017 is undersized by over 400,000 cubic feet.⁸

Risks of Increased Flooding and Damage to Downstream Private Property

As discussed above, portions of the proposed quarry property lie in FEMA-designated flood hazard zones. *See* Exhibit 9. ADEM should not issue a permit for a quarry in an area that is likely to be flooded, particularly when the quarry’s fuel farm is proposed to be located in a flood hazard zone.

Additional flooding will occur downstream of proposed outfalls as a result of increased stormwater runoff and the lack of vegetation to absorb rainfalls. This will affect both aquatic habitat and downstream private property. Outfall 002 in particular will increase flooding on private property significantly, regardless of rainfall. Some of the sediment associated with the higher flows will be deposited on private property as well, resulting in injury to property owners

⁶ November 14, 2012 PAP plan at 7.

⁷ Alabama Handbook Volume 1, March 2009, at 293.

⁸ Outfall 008 is undersized by 71,748 cubic feet. Outfall 017 is undersized by 408,384 cubic feet. Outfall 024 is undersized by 5,004 cubic feet. Outfall 027 is undersized by 28,044 cubic feet. Outfall 028 is undersized by 5,184 cubic feet.

over and above the effects of the flooding itself. ADEM cannot knowingly issue permits that authorize such damage, which directly conflicts with Permit Condition II.C.7 (stating that the permit “does not... authorize any injury to persons or property or invasion of other private rights”).

Taking of Endangered and Threatened Species

The federal Endangered Species Act prohibits the “taking” of endangered or threatened species. 16 U.S.C. § 1538. “Taking” is defined broadly by statute to include “harassing” or “harming” a species. 16 U.S.C. § 1532(19). FWS regulations further define “harass” and “harm” as injuring species directly or via significant habitat modification, or making such injury more likely to occur. 50 C.F.R. § 17.3. Three aquatic species occur in the area of the proposed discharges, and the significant sediment discharges that this draft permit allows could lead to takings.

The tulotoma snail (*Tulotoma magnifica*) is a threatened species originally listed in 1991. Endemic to Alabama, it now exists in 10 percent of its historic range.⁹ One of the former populations of tulotoma snail was completely eliminated at a site where “impacts of nonpoint source pollution...including excessive sedimentation and algal growth, have been observed (Hartfield 1992).”¹⁰ The U.S. Fish and Wildlife Service (“FWS”) has noted that “within its respective watersheds, each population is vulnerable to changes in land use that might result in detrimental impacts (e.g., urbanization and increased nonpoint source pollution).”¹¹ FWS went on to state that “federal agency actions that may require consultation include, but are not limited to, the carrying out or issuance of permits for... discharges, wastewater facility development... (and) mining” (emphasis added).¹² There is an in-river population of tulotoma snail in Upper Lay Lake in the vicinity of the proposed discharge at Outfall 001 and downstream of tributaries that will receive discharges from White Rock’s quarry.

The southern clubshell (*Pleurobema decisum*) was listed as endangered in 1993 and is known to occur in the Coosa River below Logan Martin Dam.¹³ According to FWS, “all populations are experiencing sediment and water quality problems, and are susceptible to stochastic and chronic events (e.g. spills, drought and/or land use runoff).”¹⁴ FWS has also noted that mining that results in adverse habitat modifications and impacts must be fully assessed to establish need and alternatives.¹⁵

⁹ See 76 FR 31866 (June 2, 2011).

¹⁰ *Id.*

¹¹ *Id.*

¹² *Id.*

¹³ See U.S. Fish and Wildlife Service, “5-Year Review: Summary and Evaluation.” 70 FR 34492-34494 (June 14, 2005). Available at: http://ecos.fws.gov/docs/five_year_review/doc2365.pdf <last visited April 10, 2014>.

¹⁴ *Id.*

¹⁵ U.S. Fish and Wildlife Service, “Mobile River Basin Aquatic Ecosystem Recovery Plan” (2000). Available at http://ecos.fws.gov/docs/recovery_plan/001117.pdf <last visited April 10, 2014>.

The painted rocksnail (*Leptoxis taeniata*) was listed as a threatened species in 1998. It is the only known survivor of the 15 species of rocksnail that historically occurred in the Coosa River basin. A population exists in the main stem of the Coosa River in the area of the proposed discharge at Outfall 001. According to the rocksnail's recovery plan, excessive sediments are believed to impact riverine snails requiring clean, hard shoal stream and river bottoms, by making the habitat unsuitable for feeding or reproduction. Similar impacts resulting from sediments have been noted for many other components of aquatic communities. For example, sediments have been shown to abrade and/or suffocate periphyton (organisms attached to underwater surfaces, upon which snails may feed); affect respiration, growth, reproductive success, and behavior of aquatic insects and mussels; and affect fish growth, survival, and reproduction.¹⁶

The three species described above are all sensitive to increased sediment loading. Sedimentation can directly rob aquatic snail species of suitable substrate on which to live, and also can affect its food sources. ADEM should work with FWS to establish permit conditions that will ensure that this operation does not affect listed species, or else this permit risks violation of the Endangered Species Act. Specifically, ADEM should consider requiring the relocation of Outfall 001 downstream of Gorman Park on the Coosa River, which would take the discharge below the species populations (although this will not cure the problem with the discharge affecting the drinking water supply intake).

Risks of Sinkholes and Groundwater Contamination

As noted in the accompanying maps and the 2009 geological report of the White Rock site, "a number of sinkholes have been documented on and adjacent to the planned quarry property in the past 30 years." The report also stated that drawdown operations will be necessary once the quarry depth reaches the groundwater table level. This geology greatly increases the chance that this quarry could dewater nearby creeks and private drinking-water wells. At least three Coosa Riverkeeper members have property with private wells close to the quarry site.

Other quarries in eastern Alabama have actually dried up entire creeks because of effects from groundwater drawdown. These include Martin Marietta's quarry next to Chewacla State Park, which dewatered approximately 0.75 miles of Chewacla Creek and contributed to temporary partial closure of Chewacla State Park; and Hanson/Oldcastle Quarry in Opelika, AL, which dewatered Spring Villa Park.¹⁷ Such a result here would naturally interfere with the receiving waters' designation and existing uses as Fish and Wildlife waters.

White Rock's operations also threaten to worsen existing groundwater contamination from the nearby Alabama Plating Company Superfund site. See ALD004022448 NPL Final September 2012. Groundwater is already migrating from that site, close to the area of White Rock's property. Contaminants include cadmium, copper, and zinc, and have already been

¹⁶ U.S. Fish and Wildlife Service, "Recovery Plan for 6 Mobile River Basin Aquatic Snails," 2005 (citing Waters, 1995). Available at: http://ecos.fws.gov/docs/recovery_plan/051202.pdf <last visited April 10, 2014>.

¹⁷ See Exhibits 14-15 (news articles describing dewatering of Chewacla Creek and Spring Villa).

detected at the confluence of Spring Creek and the Coosa River.¹⁸ White Rock's operation, particularly in phases requiring groundwater drawdown, has the potential to accelerate contaminant migration from the Alabama Plating Company site.

Presence of Historic Sites and Artifacts

In its NPDES permit application, White Rock represented that this quarry will not “be located on Indian/historically significant lands.” Permit Application at 3. This is not accurate. The quarry footprint and surrounding area are part of the Arkwright Heritage Area, which consists of 13 separate sites. *See* Exhibit 16-18 (news article, press release, photograph of artifacts found on farmland in vicinity of White Rock quarry). At least three of these sites appear to be located on quarry property, and several more are nearby. *See* Exhibit 19 (map of Arkwright Heritage Area). Because this quarry will increase the potential for sinkhole formation, these sites could be impacted even if they are not directly mined. ADEM should not issue this permit without a more complete understanding of the impacted and threatened sites, in coordination with appropriate local, state, and national historical agencies and tribal contacts.¹⁹

Lack of Numeric Permit Limits for Aluminum, Oil, Grease, and Antifreeze

The permit materials reveal that aluminum will be used as a coagulant to aid in the settling of sediments. NPDES Individual Permit Rationale at 2. The permit suggests only monitoring of this pollutant, with no limits on actual discharge. The application also discloses that wash water for trucks will be treated in the sediment ponds, introducing oil, grease, and antifreeze into the ponds. These pollutants need limits so that they can be treated and minimized before leaving the site. Otherwise they will adversely impact the designated uses of the receiving waters in contravention of ADEM regulations. ADEM cannot knowingly issue a permit that will violate its own regulations.

Total Maximum Daily Load Compliance

While the proposed permit may not directly result in discharges associated with the existing TMDL for Lay Lake, we are concerned that such a large new sediment discharge will adversely affect the already-stressed Coosa and its ability to meet water quality standards. Sediments act as a carrier of nutrients, and it is not clear that ADEM has considered this large new sediment source in the context of the existing TMDL. Sediments also make oxygen less soluble in water by absorbing heat and raising water temperature, as well as by limiting oxygen production in plants by interfering with sunlight needed in photosynthesis. ADEM should more thoroughly review the status of TMDL compliance and place stronger permit restrictions on sediment discharge to reduce overall harm to the Coosa system.

Inadequate Monitoring

¹⁸ *See* <http://www.epa.gov/region4/superfund/sites/npl/alabama/alplcoal.html> <last visited April 16, 2014>.

¹⁹ The draft permit includes a condition that allows ADEM to terminate or revoke the permit if the discharge threatens human welfare. *See* Part II.C.2(a)(7). “Human welfare” includes such factors as loss of heritage via damage to historic sites and artifacts.

The draft permit calls for monitoring at outfalls twice per month for most pollution parameters, with no in-stream monitoring required in any receiving waters. Draft permit at 4-8. ADEM should require monitoring three times per week, which is similar to the monitoring required for NPDES permits for wastewater treatment plants. ADEM should also require in-stream monitoring in the Coosa River, Spring Creek, and Locust Creek, both upstream and downstream of the outfalls.

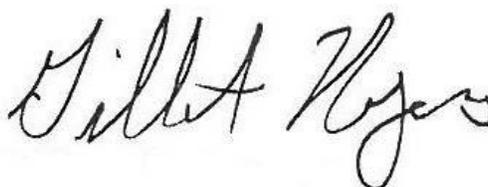
Inadequate Reporting

The draft permit relies entirely on reporting by way of Discharge Monitoring Reports (“DMRs”), which must be submitted to ADEM once per quarter. Given the nearby presence of several federally-protected species, a downstream water supply intake, and high recreational usage in this area of Lay Lake, ADEM should increase this reporting frequency to once per month.

Conclusion

Thank you for your consideration of these comments. Please contact me if you have any further questions, and please notify us of ADEM’s final decision regarding this permit application.

Sincerely yours,

A handwritten signature in black ink that reads "Gilbert B. Rogers". The signature is written in a cursive, flowing style.

Gilbert B. Rogers
Senior Attorney

cc: Lance LeFleur, ADEM
Glenda Dean, ADEM
Jeff Kitchens, ADEM
Ange Boatwright, ADEM
Schuyler Espy, ADEM
Catherine McNeill, ADEM
Kip Tyler, U.S. Environmental Protection Agency
Paul Schwartz, U.S. Environmental Protection Agency
Jim Giattina, U.S. Environmental Protection Agency
Jeff Powell, U.S. Fish and Wildlife Service
Bill Pearson, U.S. Fish and Wildlife Service
Cindy Dohner, U.S. Fish and Wildlife Service

Tom Landry, U.S. Army Corps of Engineers
Frank Chitwood, Coosa Riverkeeper
James M. Hurley, IV, White Rock Quarries, LLC
Ray McAllister, Mayor, Town of Vincent
Michael Cain, P.E., Manager, Shelby County Water Services Board

Index of Exhibits

1. Photograph of unnamed tributary to Spring Creek that will receive discharge from Outfall 002, taken by Frank Chitwood at Co Rd 62 on March 24, 2014 at 3:25 pm.
2. Photograph of culvert carrying unnamed tributary to Spring Creek that will receive discharge from Outfall 002. Photo taken by Frank Chitwood on Jack Neal's property with his express permission, on March 24, 2014 at 1:11 pm. This culvert already floods and will likely need to be replaced entirely to accommodate Outfall 002's discharge.
3. Photograph of same culvert in flood a week after rain, taken by Jack Neal on his property on April 13, 2014. Waters can be seen covering road towards rear of photograph.
4. Photograph of Spring Creek with unnamed tributary that will receive discharge from Outfall 002 flowing in from the right. The bottom of Spring Creek is gravel substrate. Photograph taken by Frank Chitwood on Jack Neal's property on March 24, 2014 at 2:22 pm with his express permission.
5. Topographic map of White Rock quarry site
6. Map of White Rock quarry site showing hydric soils
7. Map of White Rock quarry site and surrounding area showing hydric soils
8. Map of White Rock quarry site showing wetlands
9. Map of White Rock quarry site showing FEMA floodplains
10. Map of White Rock quarry site and surrounding area showing wetlands and floodplains
11. June 26, 2009 assessment of White Rock quarry site prepared by A. David Kendrick, P.G., Kendrick Geologic Associates, for Coosa Riverkeeper member Perry Cole.
12. Map of White Rock quarry site prepared by A. David Kendrick using Geological Survey of Alabama data.
13. USGS map of area around White Rock quarry site. Quarry is located just south of Vincent (highlighted) and has sinkholes on site, as well as lying almost entirely within an area subject to sinkholes (along with adjacent properties).
14. Aggregate Research article, "Stands Against Quarries Rise," Dec. 30, 2002 (describing Chewacla Creek dewatering).
15. Cliff McCollum, "Spring Creek Villa Victim of 'Benign Neglect': Historic Home Penn Yonge Found with Black Mold, Rotting Wood, Bat Infestation; Budget Woes, Lack of

Oversight Cited as Causes,” *Opelika Observer*, Oct. 23, 2011 (referencing lawsuit against Oldcastle Materials for loss of spring and sinkholes).

16. Preserve Alabama, “Arkwright Heritage Area in Shelby County Added to Alabama Register of Landmarks and Heritage,” Oct. 7, 2011.
17. Christine Boatwright, “Lost Village of Arkwright Found,” *Shelby County Reporter*, Oct. 17, 2011 (listing 13 sites).
18. Photograph of items of Indian and historical significance collected in the area of White Rock quarry property by Albert Datcher and family while farming in the 1970s. Taken by Frank Chitwood on January 23, 2012, in Albert Datcher home with express permission.
19. Map of Arkwright Heritage Area by Anne Gibbons, Vincent Historical Society (showing sites located within White Rock quarry footprint).