

**ATTACHMENT II-G**  
**SURFACE WATER HYDROLOGY**

Surface runoff from the proposed Riverview Development, LLC. - Riverview Mine will drain into an unnamed tributary to Warren Smith Creek (or Dry Creek, based on the location of the stream). Warren Smith Creek becomes Dry Creek, which in turn drains into Coon Creek, which drains into the Tennessee River. Warren Smith (Dry) Creek lies in subwatershed 160 of hydrologic unit code 06030001 as defined by the USDA Soil Conservation Service.

One sediment control structure is proposed for this facility. Sediment basin 002P will drain into an unnamed tributary to Warren Smith (Dry) Creek. Sediment basin 002P is proposed as a permanent water impoundment, fish and wildlife habitat. Warren Smith (Dry) Creek is owned by the State and is perennial. The use of Warren Smith (Dry) Creek, if any legitimate use exists, is to support the local wildlife or contribute to the quality and quantity of the Tennessee River. The use of Warren Smith (Dry) Creek has been classified as "Fish & Wildlife" in Chapter 335-6-11 -.02 of "Water Use Classifications For Interstate and Intrastate Waters" as taken from the Water Quality Program at ADEM. According to Chapter 335-6-10 of the same reference, the best usage of the "Fish & Wildlife" classification is fishing, the propagation of fish, aquatic life, and wildlife, and any other usage except utilization as a supply for drinking or food processing, or for swimming and water contact sports.

Baseline surface water quality and quantity for Warren Smith (Dry) Creek (which receives all runoff from the proposed mine site) is characterized in this report by samples taken at downstream Surface Water Monitoring Site RD4ASW-1 and upstream Surface Water Monitoring Site RD4ASW-2 as shown on the attached Mine Site Location Map.

It should be noted here that "downstream" Surface Water Monitoring Site RD4ASW-1 is not actually located downstream from, or receives drainage from, the proposed permit area. An agreement was reached prior to sampling between PERC Engineering and the Regulatory Authority to sample Warren Smith (Dry) Creek at RD4ASW-1 shown on the attached Mine Site Location Map for several valid reasons which are stated as follows: The proposed pre-mine permit area drains towards both the east and south into existing surface water impoundments from previous coal related activities. Towards the east, the proposed permit area drains into a tributary that has two sediment basins, in series, from a previous coal mining operation. Towards the south, the proposed permit area drains into a coal fines impoundment from a coal washing facility. In either case, there is not enough drainage area upstream from the impoundments (around 40-60 acres) to produce enough flowrate to collect a sample. The sediment basins towards the east change both the existing surface water quality *and* decrease runoff volume so that in periods of low rainfall, no flowrate is observed downstream. As for the impoundment towards the south, this pond is filled with coal

finer from a previous coal washing facility which decreases runoff volume but also degrades the quality of the discharge from this impoundment. In both cases, the water quality of the receiving stream downstream of the impoundments do not accurately reflect the quality of the runoff from the proposed facility, which is surface runoff from a previously surface mined area. Downstream of RD4ASW-1, where the unnamed tributaries from this mine site enter Warren Smith (Dry) Creek, the topography becomes very steep, with the stream falling off of Sand Mountain. In this remote area there is no public access to Warren Smith (Dry) Creek downstream of Surface Water Monitoring Site RD4ASW-1 and neither PERC Engineering nor the Operator has right of entry on these privately held areas. There is also no available public access to this stream between Surface Water Monitoring Site RD4ASW-1 and impounded water in the Tennessee River.

As for Surface Water Monitoring Site RD4ASW-1, it was selected as the best monitoring location because: 1) it is located adjacent to the proposed mine site, 2) it is located on the same stream that receives runoff from the unnamed tributaries (which receive drainage from the proposed mine site), 3) the same surface water which flows by this monitoring site also flows into and mixes with surface runoff from the proposed mine site, 4) there is public access to the monitoring site, 5) its drainage area is large enough to maintain the quantity needed for sampling, 6) its watershed has the same geology and land uses as the proposed mine site and adjacent areas (much of the watershed of Site RD4ASW-1 is previously surface mined), and 7) utilizing this

site for baseline sampling conservatively assumes the water quality in Warren Smith (Dry) Creek is better than it actually is downstream due to the contribution of discharge from the fines impoundment described above.

Downstream Surface Water Monitoring Site RD4ASW-1 was also sampled as baseline monitoring for the GTM Mining Corporation - No. 3 Mine (ASMC permit number P-3889) as site GTMM3SW1. Personnel of the PERC Engineering Laboratory have sampled downstream Surface Water Monitoring Site RD4ASW-1(GTMM3SW1) on 13 occasions between 09-16-05 and 06-25-10. In addition, personnel of the PERC Engineering Laboratory have sampled upstream Surface Water Monitoring Site RD4ASW-2 on five occasions between 03-05-10 and 06-25-10. Parameters tested at both sites include flowrate (discharge), pH, total iron, total manganese, total suspended solids, specific conductance, sulfates, acidity, and alkalinity. All samples were analyzed by the PERC Engineering Laboratory according to ASTM standards.

Surface water samples were taken by the 'grab' method. Flowrate measurement of surface water samples shall be according to ASTM D3858 "Standard Practice for Open Channel Flow Measurement of Water by Velocity - Area Method" or other equally valid methods. See attached analysis.

All parameters mentioned above were plotted vs. stream flow (in CFSM) to characterize water quality in the receiving stream at different flowrates prior to mining

by Riverview Development, LLC. at the proposed -Riverview Mine. Baseline conditions at the 7Q2, Average, and 2 yr. flowrates are given in the Determination of the Probable Hydrologic Consequences (Attachment II-H).

Downstream Surface Water Monitoring Site RD4ASW-1(GTMM3SW1) drains approximately 8.68 square miles. In general, slope conditions within this watershed is variable but predominantly moderate. Elevations range from approximately 1601 feet MSL at the drainage divide to approximately 1303 feet MSL at the monitoring site. The pre-mine landuse within the drainage area of Surface Water Monitoring Site RD4ASW-1(GTMM3SW1) has been estimated at approximately 12.07 percent agricultural and open spaces, 52.68 percent forest, and 35.25 percent previously disturbed as referenced in the Stevenson and Flat Rock, Alabama U.S.G.S. 7.5 minute Quadrangles and updated utilizing ASMC information.

A topsoil waiver is not proposed for this facility because the entire permit is previously disturbed and all cover material currently covering the washer reject will be utilized for reclamation.

Dominant soil series within this watershed area are limited to Enders, Hartsells, and Muskingum soil series. Descriptions of these soil series were taken from published soil surveys and are as follows:

### ENDERS SERIES:

Soils of the Enders series are moderately deep and deep, well drained, and gently sloping to moderately steep. They formed in material weathered from interbedded shale and sandstone. These soils are on ridgetops on the Southern Appalachian Plateau and are also on some of the side slopes. The following describes a representative profile:

0 to 5 inches: brown, very friable loam.

5 to 40 inches: red, firm silty clay; has some yellowish-brown mottles in lower part; blocky structure

40 to 52 inches: mottled red and brown, firm silty clay

52 inches + : level-bedded shale

These soils are very strongly acid. Their content of organic matter and their natural fertility are low. Crops grown on these soils make good response to lime and fertilizer. Water enters the soils readily and moves through the profile at a moderate to slow rate. The available moisture capacity is moderate to low. The root zone is moderately deep.

### HARTSELLS SERIES:

The Hartsells series consists of shallow to moderately deep, well-drained soils that are gently sloping or sloping in most places. These soils developed mainly in residuum

weathered from sandstone that is interbedded, in places, with thin lenses of shale. The depth to bedrock ranges from about 12 to 60 inches. Hartsells soils are low in natural fertility and in organic matter. The following describes a representative profile:

0 to 6 inches: grayish-brown fine sandy loam, weak, fine, granular structure; very friable; many fine roots; few fragments of sandstone; strongly acid; clear wavy boundary.

6 to 10 inches: yellowish-brown fine sandy loam; weak, fine, granular and subangular blocky structure; friable; many fine roots; few small fragments of sandstone, strongly acid; clear wavy boundary.

10 to 26 inches: yellowish-brown loam; weak, medium, subangular blocky structure; friable; few fine roots; strongly acid; clear smooth boundary.

These soils are strongly acid. Infiltration for water is medium, and the permeability of the subsoil is moderate. The moisture-supplying capacity ranges from low to moderately high. The hazard of erosion is moderate to severe. Because of low moisture-supplying capacity and generally strong slopes, the shallow Hartsells soils are better suited to sod crops and to trees, mainly to loblolly pine.

#### MUSKINGUM SERIES:

The Muskingum series consists of shallow and very shallow, excessively drained, strongly sloping to steep soils. These soils formed in residuum weathered mainly from sandstone but partly from shale. The following describes a representative profile:

0 to 2 inches: very dark grey stony fine sandy loam; weak, fine, granular structure; very friable; many fine roots; strongly acid; clear wavy boundary.

2 to 8 inches: greyish-brown to dark greyish-brown stony fine sandy loam; weak, fine, granular structure; very friable; many fine roots; strongly acid; clear wavy boundary.

8 to 12 inches: yellowish-brown; stony fine sandy loam; weak, fine, granular and some weak, fine subangular blocky structure; friable; strongly acid.

12 inches +: partly weathered sandstone

The Muskingum soils are low in natural fertility and in organic matter. They are strongly acid. Surface runoff is medium to rapid, infiltration of water is medium, and permeability is rapid. The moisture-supplying capacity is low. The hazard of erosion is moderate to severe. The native vegetation is mainly oak, hickory, sassafras, dogwood, and pine. Most of the acreage of these soils is wooded and should be left in trees. Pine is very well suited. These soils are not generally suitable for cultivation.

**Riverview Development LLC.  
Riverview Mine 40 Acre Tract  
Surface Water Analysis for  
GTMM3SW1/RD4ASW1**

	<u>Flow</u>	<u>Cond</u>	<u>Fe</u>	<u>Mn</u>	<u>TSS</u>	<u>pH</u>	<u>SO4</u>	<u>Acidity</u>	<u>Alk</u>
GTMM3SW1									
9/16/2005	10.81	350.00	0.33	0.24	1.00	7.24	115.00	4.00	32.00
10/28/2005	4.17	398.00	0.45	0.07	1.00	7.57	140.00	4.00	36.00
11/17/2005	3.19	388.00	0.72	0.20	3.00	6.68	150.00	6.00	36.00
1/27/2006	10.36	176.00	0.39	0.22	0.50	6.33	67.00	6.00	10.00
2/24/2006	10.78	173.00	0.43	0.33	0.50	6.42	65.00	4.00	10.00
3/16/2006	9.54	193.00	0.54	0.36	0.50	6.69	68.00	6.00	40.00
2/21/2007	3.47	178.00	0.38	0.39	0.50	6.41	76.00	8.00	12.00
6/21/2007	28.99	303.00	0.59	0.63	6.00	6.77	118.00	8.00	36.00
RD4ASW-1									
2/26/2010	4.18	186.00	0.55	0.52	4.00	6.87	80.00	6.00	10.00
3/30/2010	3.55	160.00	0.77	0.44	4.00	6.84	62.00	6.00	12.00
4/23/2010	6.75	225.00	0.50	0.80	2.00	6.78	65.00	6.00	16.00
5/24/2010	5.45	236.00	0.67	1.04	6.00	6.97	61.00	8.00	20.00
6/25/2010	5.16	286.00	0.68	1.52	4.00	6.85	64.00	6.00	24.00

PERC ENGINEERING CO., INC.  
P.O. Box 1712  
Jasper, Alabama 35502  
(205) 384-5553

Sample Number : 89575  
Client : GTM Mining Corporation  
Facility : Mine #3  
Job Number :  
NPDES Permit # :  
Basin,Stream,Well ID: GTMM3SW1  
Code : S  
Date Taken : 09/16/2005  
Sampled By : mw  
Time Taken : 1335  
Depth or Flow : 10.81cfs  
Tests to be done : pH, TSS, Cond, Fe, Mn, SO4, Acid,  
Alk, Report,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	4	mg/l	Heath Brown	09/23/2005	0820	305.1 (1)
Alkalinity	32	mg/l	Heath Brown	09/23/2005	1400	310.1 (1)
Conductivity	350	umhos	Sherri Fields	09/19/2005	1300	120.1 (1)
Iron	0.33	mg/l	Sherri Fields	09/19/2005	1443	236.1 (1)
Manganese	0.24	mg/l	Sherri Fields	09/19/2005	1511	243.1 (1)
pH	7.24	s.u.	Mark Williams	09/15/2005	1338	150.1 (1)
Report			Amy R. McCarty	10/06/2005	1200	
Sulfate	115	mg/l	Sherri Fields	09/27/2005	1325	8051 (3)
TSS	1	mg/l	Sherri Fields	09/19/2005	1035	160.2 (1)

- 1) EPA-600/4-79-020 Revised March 1983
- 2) Standard Methods for the Examination Water and Wastes Water
- 3) HACH Water Analysis Handbook, 2nd Edition
- 4) EPA-600/4-88/039 Revised July 1991
- 5) EPA, Test Methods for Evaluating Solid Waste, SW-846, 3rd Edition
- 6) Code of Federal Regulations, Title 40, Part 136, Appendix A

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PERC ENGINEERING CO., INC.  
P.O. Box 1712  
Jasper, Alabama 35502  
(205) 384-5553

Sample Number : 90567  
Client : GTM Mining Corporation  
Facility : Mine #3  
Job Number :  
NPDES Permit # :  
Basin, Stream, Well ID: GTMM3SW1  
Code : s  
Date Taken : 10/28/2005  
Sampled By : dcm  
Time Taken : 1030  
Depth or Flow : 4.17 cfs  
Tests to be done : pH, Fe, Mn, Cond, SO4, TSS,  
Acid, Alk,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	4	mg/l	Heath Brown	11/07/2005	0810	305.1 (1)
Alkalinity	36	mg/l	Heath Brown	11/07/2005	1035	310.1 (1)
Conductivity	398	umhos	Sherri Fields	11/01/2005	0945	120.1 (1)
Iron	0.45	mg/l	Sherri Fields	10/31/2005	1328	236.1 (1)
Manganese	0.07	mg/l	Sherri Fields	10/31/2005	1351	243.1 (1)
pH	7.57	s.u.	Danny C. Mays	10/28/2005	1030	150.1 (1)
Sulfate	140	mg/l	Sherri Fields	11/01/2005	1404	8051 (3)
TSS	1	mg/l	Sherri Fields	10/31/2005	1512	160.2 (1)

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PERC ENGINEERING CO., INC.  
P.O. Box 1712  
Jasper, Alabama 35502  
(205) 384-5553

Sample Number : 91076  
Client : GTM Mining Corporation  
Facility : Mine #3  
Job Number :  
NPDES Permit # :  
Basin, Stream, Well ID: GTMM3SW1  
Code : s  
Date Taken : 11/17/2005  
Sampled By : dcm  
Time Taken : 1345  
Depth or Flow : 3.19cfs  
Tests to be done : pH, Cond, Fe, Mn, SO4, Acid, Alk,  
TSS,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	6	mg/l	Heath Brown	11/21/2005	1005	305.1 (1)
Alkalinity	36	mg/l	Heath Brown	11/21/2005	1435	310.1 (1)
Conductivity	388	umhos	Sherri Fields	11/28/2005	1318	120.1 (1)
Iron	0.72	mg/l	Sherri Fields	11/23/2005	1517	236.1 (1)
Manganese	0.20	mg/l	Sherri Fields	11/23/2005	1552	243.1 (1)
pH	6.68	s.u.	Danny C. Mays	11/17/2005	1345	150.1 (1)
Sulfate	150	mg/l	Sherri Fields	11/29/2005	1340	8051 (3)
TSS	3	mg/l	Sherri Fields	11/22/2005	1124	160.2 (1)

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PERC ENGINEERING CO., INC.  
P.O. Box 1712  
Jasper, Alabama 35502  
(205) 384-5553

Sample Number : 92649  
Client : GTM Mining Corporation  
Facility : Mine #3  
Job Number :  
NPDES Permit # :  
Basin, Stream, Well ID: GTMM3SW1  
Code : s  
Date Taken : 01/27/2006  
Sampled By : ddb  
Time Taken : 0845  
Depth or Flow : 10.36cfs  
Tests to be done : pH, TSS, Cond, Fe, Mn, SO4, Acid,  
Alk, Report,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	6	mg/l	Heath Brown	02/03/2006	0835	305.1 (1)
Alkalinity	10	mg/l	Heath Brown	02/03/2006	1025	310.1 (1)
Conductivity	176	umhos	Sherri Fields	01/30/2006	1640	120.1 (1)
Iron	0.39	mg/l	Sherri Fields	01/31/2006	1210	236.1 (1)
Manganese	0.22	mg/l	Sherri Fields	01/31/2006	1244	243.1 (1)
pH	6.33	s.u.	Doug Batemon	01/27/2006	0845	150.1 (1)
Report			Amy R. McCarty	02/10/2006	1200	
Sulfate	67	mg/l	Sherri Fields	01/31/2006	1315	8051 (3)
TSS	<1	mg/l	Sherri Fields	01/30/2006	1545	160.2 (1)

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PERC ENGINEERING CO., INC.  
P.O. Box 1712  
Jasper, Alabama 35502  
(205) 384-5553

Sample Number : 93223  
Client : GTM Mining Corporation  
Facility : Mine #3  
Job Number :  
NPDES Permit # :  
Basin, Stream, Well ID: GTMM3SW1  
Code : s  
Date Taken : 02/24/2006  
Sampled By : dcm  
Time Taken : 0925  
Depth or Flow : 10.78cfs  
Tests to be done : pH, TSS, Fe, Mn, SO4, Acid, Alk,  
Cond, Report,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	4	mg/l	Heath Brown	03/03/2006	1245	305.1 (1)
Alkalinity	10	mg/l	Heath Brown	03/03/2006	1425	310.1 (1)
Conductivity	173	umhos	Sherri Fields	03/08/2006	1028	120.1 (1)
Iron	0.43	mg/l	Sherri Fields	02/28/2006	1151	236.1 (1)
Manganese	0.33	mg/l	Sherri Fields	02/28/2006	1222	243.1 (1)
pH	6.42	s.u.	Doug Batemon	02/24/2006	0925	150.1 (1)
Report			Amy R. McCarty	03/10/2006	1200	
Sulfate	65	mg/l	Sherri Fields	03/09/2006	1552	8051 (3)
TSS	<1	mg/l	Sherri Fields	02/27/2006	1020	160.2 (1)

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PERC ENGINEERING CO., INC.  
P.O. Box 1712  
Jasper, Alabama 35502  
(205) 384-5553

Sample Number : 93719  
Client : GTM Mining Corporation  
Facility : Mine #3  
Job Number :  
NPDES Permit # :  
Basin, Stream, Well ID: GTMM3SW1  
Code : s  
Date Taken : 03/16/2006  
Sampled By : ddb  
Time Taken : 1010  
Depth or Flow : 9.54cfs  
Tests to be done : pH, Cond, Fe, Mn, SO4, Acid, Alk,  
TSS, Report,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	6	mg/l	Heath Brown	03/20/2006	0805	305.1 (1)
Alkalinity	40	mg/l	Heath Brown	03/20/2006	1110	310.1 (1)
Conductivity	193	umhos	Sherri Fields	03/24/2006	1100	120.1 (1)
Iron	0.54	mg/l	Sherri Fields	03/21/2006	1337	236.1 (1)
Manganese	0.36	mg/l	Sherri Fields	03/21/2006	1421	243.1 (1)
pH	6.69	s.u.	Doug Batemon	03/16/2006	1010	150.1 (1)
Report			Amy R. McCarty	03/31/2006	1200	
Sulfate	68	mg/l	Sherri Fields	03/24/2006	1435	8051 (3)
TSS	<1	mg/l	Sherri Fields	03/20/2006	1150	160.2 (1)

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PERC ENGINEERING CO., INC.  
P.O. Box 1712  
Jasper, Alabama 35502  
(205) 384-5553

Sample Number : 102008  
Client : GTM Mining Corporation  
Facility : Mine #3  
Job Number :  
NPDES Permit # :  
Basin, Stream, Well ID: SW-1  
Code : S  
Date Taken : 02/21/2007  
Sampled By : ddb  
Time Taken : 0935  
Depth or Flow : 3.47cfs  
Tests to be done : pH, Cond, Fe, Mn, TSS, Acid, Alk,  
SO4, Report,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	8	mg/l	Heath Brown	02/26/2007	0825	305.1 (1)
Alkalinity	12	mg/l	Heath Brown	02/26/2007	0920	310.1 (1)
Conductivity	178	us/cm	Doug Batemon	02/21/2007	0935	120.1 (1)
Iron	0.38	mg/l	Danny C. Mays	02/26/2007	1320	236.1 (1)
Manganese	0.39	mg/l	Danny C. Mays	02/26/2007	1310	243.1 (1)
pH	6.41	s.u.	Doug Batemon	02/21/2007	0935	150.1 (1)
Report			Sherri Fields	02/27/2007	1600	
Sulfate	76	mg/l	Sherri Fields	02/27/2007	1130	8051 (3)
TSS	<1	mg/l	Sherri Fields	02/23/2007	1525	160.2 (1)

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PERC ENGINEERING CO., INC.  
P.O. Box 1712  
Jasper, Alabama 35502  
(205) 384-5553

Sample Number : 104696  
Client : GTM Mining Corporation  
Facility : Mine #3  
Job Number :  
NPDES Permit # :  
Basin, Stream, Well ID: GTMM3SW1  
Code : s  
Date Taken : 06/21/2007  
Sampled By : rm  
Time Taken : 0930  
Depth or Flow : 28.99cfs  
Tests to be done : pH, TSS, Fe, Mn, Cond, SO4, Acid,  
Alk, Report,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	8	mg/l	Heath Brown	06/26/2007	0800	305.1 (1)
Alkalinity	36	mg/l	Heath Brown	06/26/2007	0855	310.1 (1)
Conductivity	303	us/cm	Heath Brown	06/25/2007	1605	120.1 (1)
Iron	0.59	mg/l	Sherri Fields	06/27/2007	1522	236.1 (1)
Manganese	0.63	mg/l	Sherri Fields	06/27/2007	1528	243.1 (1)
pH	6.77	s.u.	Sherri Fields	06/25/2007	1104	150.1 (1)
Report			Sherri Fields	07/11/2007	0815	
Sulfate	118	mg/l	Heath Brown	07/10/2007	1630	8051 (3)
TSS	6	mg/l	Heath Brown	06/25/2007	1510	160.2 (1)

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PERC ENGINEERING CO., INC.  
P.O. Box 1712  
Jasper, Alabama 35502  
(205) 384-5553

Sample Number : 130115  
Client : Riverview Development LLC.  
Facility : Riverview Mine 40 Acre Tract  
Job Number :  
NPDES Permit # :  
Basin, Stream, Well ID: RD4ASW-1  
Code : s  
Date Taken : 02/26/2010  
Sampled By : dcm  
Time Taken : 1600  
Depth or Flow : 4.18 cfs  
Tests to be done : pH, Fe, Mn, Cond, SO4, Acid, Alk,  
Report, TSS,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	6	mg/l	Heath Brown	03/02/2010	0800	305.1 (1)
Alkalinity	10	mg/l	Heath Brown	03/02/2010	1505	310.1 (1)
Conductivity	186	umhos	Danny C. Mays	02/26/2010	1600	120.1 (1)
Iron	0.55	mg/l	Allen Bailey	03/02/2010	1305	236.1 (1)
Manganese	0.52	mg/l	Allen Bailey	03/02/2010	1445	243.1 (1)
pH	6.87	s.u.	Danny C. Mays	02/26/2010	1600	150.1 (1)
Report			Sherri Fields	03/10/2010		
Sulfate	80	mg/l	Heath Brown	03/09/2010	1400	8051 (3)
TSS	4	mg/l	Heath Brown	03/01/2010	1510	160.2 (1)

- 1) EPA-600/4-79-020 Revised March 1983
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- 4) EPA-600/4-88/039 Revised July 1991
- 5) EPA, Test Methods for Evaluating Solid Waste, SW-846, 3rd Edition
- 6) Code of Federal Regulations, Title 40, Part 136, Appendix A

APPROVED BY: \_\_\_\_\_

PERC ENGINEERING CO., INC.  
P.O. Box 1712  
Jasper, Alabama 35502  
(205) 384-5553

Sample Number : 131007  
Client : Riverview Development LLC.  
Facility : Riverview Mine 40 Acre Tract  
Job Number :  
NPDES Permit # :  
Basin, Stream, Well ID: RD4ASW-1  
Code : s  
Date Taken : 03/30/2010  
Sampled By : dcm  
Time Taken : 1720  
Depth or Flow : 3.55 cfs  
Tests to be done : pH, Cond, Fe, Mn, SO4, Acid, Alk,  
Report, TSS,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	6	mg/l	Heath Brown	04/06/2010	0840	305.1 (1)
Alkalinity	12	mg/l	Heath Brown	04/06/2010	1520	310.1 (1)
Conductivity	160	umhos	Danny C. Mays	03/30/2010	1720	120.1 (1)
Iron	0.77	mg/l	Danny C. Mays	04/06/2010	1425	236.1 (1)
Manganese	0.44	mg/l	Danny C. Mays	04/06/2010	1530	243.1 (1)
pH	6.84	s.u.	Danny C. Mays	03/30/2010	1720	150.1 (1)
Report			Sherri Fields	04/07/2010		
Sulfate	62	mg/l	Heath Brown	04/05/2010	1515	8051 (3)
TSS	4	mg/l	Heath Brown	03/31/2010	1555	160.2 (1)

- 1) EPA-600/4-79-020 Revised March 1983
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PERC ENGINEERING CO., INC.  
P.O. Box 1712  
Jasper, Alabama 35502  
(205) 384-5553

Sample Number : 131893  
Client : Riverview Development LLC.  
Facility : Riverwiew Mine 40 Acre Tract  
Job Number :  
NPDES Permit # :  
Basin,Stream,Well ID: RD4ASW-1  
Code : s  
Date Taken : 04/23/2010  
Sampled By : dcm  
Time Taken : 1615  
Depth or Flow : 6.794cfs  
Tests to be done : pH, Fe, Mn, Cond, SO4, Acid, Alk,  
Report, TSS,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	6	mg/l	Heath Brown	04/30/2010	0800	305.1 (1)
Alkalinity	16	mg/l	Heath Brown	04/30/2010	0905	310.1 (1)
Conductivity	225	umhos	Danny C. Mays	04/23/2010	1615	120.1 (1)
Iron	0.50	mg/l	Allen Bailey	04/27/2010	1500	236.1 (1)
Manganese	0.80	mg/l	Allen Bailey	04/27/2010	1445	243.1 (1)
pH	6.78	s.u.	Danny C. Mays	04/23/2010	1615	150.1 (1)
Report			Sherri Fields	04/30/2010		
Sulfate	65	mg/l	Heath Brown	04/30/2010	0915	8051 (3)
TSS	2	mg/l	Heath Brown	04/27/2010	1610	160.2 (1)

- 1) EPA-600/4-79-020 Revised March 1983
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- 4) EPA-600/4-88/039 Revised July 1991
- 5) EPA, Test Methods for Evaluating Solid Waste, SW-846, 3rd Edition
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PERC ENGINEERING CO., INC.  
P.O. Box 1712  
Jasper, Alabama 35502  
(205) 384-5553

Sample Number : 132632  
Client : Riverview Development LLC.  
Facility : Riverwiew Mine 40 Acre Tract  
Job Number :  
NPDES Permit # :  
Basin, Stream, Well ID: RD4ASW-1  
Code : S  
Date Taken : 05/24/2010  
Sampled By : dcm  
Time Taken : 1550  
Depth or Flow : 5.45 cfs  
Tests to be done : pH, Fe, Mn, Cond, SO4, Acid, Alk,  
Report, TSS,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	8	mg/l	Heath Brown	05/25/2010	0900	305.1 (1)
Alkalinity	20	mg/l	Heath Brown	05/25/2010	1000	310.1 (1)
Conductivity	236	umhos	Danny C. Mays	05/24/2010	1550	120.1 (1)
Iron	0.67	mg/l	Allen Bailey	05/28/2010	1420	236.1 (1)
Manganese	1.04	mg/l	Allen Bailey	05/28/2010	1525	243.1 (1)
pH	6.97	s.u.	Danny C. Mays	05/24/2010	1550	150.1 (1)
Report			Sherri Fields	06/01/2010		
Sulfate	61	mg/l	Heath Brown	05/25/2010	1520	8051 (3)
TSS	6	mg/l	Heath Brown	05/25/2010	1100	160.2 (1)

- 1) EPA-600/4-79-020 Revised March 1983
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- 4) EPA-600/4-88/039 Revised July 1991
- 5) EPA, Test Methods for Evaluating Solid Waste, SW-846, 3rd Edition
- 6) Code of Federal Regulations, Title 40, Part 136, Appendix A

APPROVED BY: Mark Williams

PERC ENGINEERING CO., INC.  
P.O. Box 1712  
Jasper, Alabama 35502  
(205) 384-5553

Sample Number : 133542  
Client : Riverview Development LLC.  
Facility : Riverview Mine 40 Acre Tract  
Job Number :  
NPDES Permit # :  
Basin, Stream, Well ID: RD4ASW-1  
Code : s  
Date Taken : 06/25/2010  
Sampled By : dcm  
Time Taken : 1300  
Depth or Flow :  
Tests to be done : pH, Fe, Mn, Cond, SO4, Acid, Alk,  
Report, TSS,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	6	mg/l	Heath Brown	07/09/2010	1050	305.1 (1)
Alkalinity	24	mg/l	Heath Brown	07/09/2010	1330	310.1 (1)
Conductivity	286	umhos	Danny C. Mays	06/25/2010	1300	120.1 (1)
Iron	0.68	mg/l	Allen Bailey	07/02/2010	1425	236.1 (1)
Manganese	1.52	mg/l	Allen Bailey	07/02/2010	1530	243.1 (1)
pH	6.85	s.u.	Danny C. Mays	06/25/2010	1300	150.1 (1)
Report			Sherri Fields	07/21/2010		
Sulfate	64	mg/l	Heath Brown	06/29/2010	0800	8051 (3)
TSS	4	mg/l	Heath Brown	06/28/2010	0945	160.2 (1)

- 1) EPA-600/4-79-020 Revised March 1983
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PERC ENGINEERING CO., INC.  
P.O. Box 1712  
Jasper, Alabama 35502  
(205) 384-5553

Sample Number : 130286  
Client : Riverview Development LLC.  
Facility : Riverview Mine 40 Acre Tract  
Job Number :  
NPDES Permit # :  
Basin, Stream, Well ID: RD4ASW-2  
Code : S  
Date Taken : 03/05/2010  
Sampled By : mw  
Time Taken : 1125  
Depth or Flow : 0.05 cfs  
Tests to be done : pH, Fe, Mn, Cond, SO4, Acid, Alk,  
Report, TSS,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	14	mg/l	Heath Brown	03/16/2010	0900	305.1 (1)
Alkalinity	48	mg/l	Heath Brown	03/16/2010	1445	310.1 (1)
Conductivity	214	umhos	Heath Brown	03/08/2010	1615	120.1 (1)
Iron	0.13	mg/l	Allen Bailey	03/09/2010	1335	236.1 (1)
Manganese	0.02	mg/l	Allen Bailey	03/09/2010	1445	243.1 (1)
pH	7.16	s.u.	Mark Williams	03/05/2010	1125	150.1 (1)
Report			Sherri Fields	03/17/2010		
Sulfate	56	mg/l	Heath Brown	03/10/2010	1000	8051 (3)
TSS	5	mg/l	Heath Brown	03/08/2010	1530	160.2 (1)

- 1) EPA-600/4-79-020 Revised March 1983
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PERC ENGINEERING CO., INC.  
P.O. Box 1712  
Jasper, Alabama 35502  
(205) 384-5553

Sample Number : 131008  
Client : Riverview Development LLC.  
Facility : Riverview Mine 40 Acre Tract  
Job Number :  
NPDES Permit # :  
Basin, Stream, Well ID: RD4ASW-2  
Code : s  
Date Taken : 03/30/2010  
Sampled By : dcm  
Time Taken : 1630  
Depth or Flow : 0.040cfs  
Tests to be done : pH, Cond, Fe, Mn, SO4, Acid, Alk,  
Report, TSS,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	12	mg/l	Heath Brown	04/06/2010	0840	305.1 (1)
Alkalinity	48	mg/l	Heath Brown	04/06/2010	1520	310.1 (1)
Conductivity	197	umhos	Danny C. Mays	03/30/2010	1630	120.1 (1)
Iron	0.12	mg/l	Danny C. Mays	04/06/2010	1425	236.1 (1)
Manganese	0.05	mg/l	Danny C. Mays	04/06/2010	1530	243.1 (1)
pH	6.72	s.u.	Danny C. Mays	03/30/2010	1630	150.1 (1)
Report			Sherri Fields	04/07/2010		
Sulfate	53	mg/l	Heath Brown	04/05/2010	1515	8051 (3)
TSS	2	mg/l	Heath Brown	03/31/2010	1555	160.2 (1)

- 1) EPA-600/4-79-020 Revised March 1983
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- 4) EPA-600/4-88/039 Revised July 1991
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PERC ENGINEERING CO., INC.  
P.O. Box 1712  
Jasper, Alabama 35502  
(205) 384-5553

Sample Number : 131894  
Client : Riverview Development LLC.  
Facility : Riverview Mine 40 Acre Tract  
Job Number :  
NPDES Permit # :  
Basin, Stream, Well ID: RD4ASW-2  
Code : s  
Date Taken : 04/23/2010  
Sampled By : dcm  
Time Taken : 1354  
Depth or Flow : 0.022cfs  
Tests to be done : pH, Fe, Mn, Cond, SO4, Acid, Alk,  
Report, TSS,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	14	mg/l	Heath Brown	04/30/2010	0800	305.1 (1)
Alkalinity	58	mg/l	Heath Brown	04/30/2010	0905	310.1 (1)
Conductivity	224	umhos	Danny C. Mays	04/23/2010	1354	120.1 (1)
Iron	0.16	mg/l	Allen Bailey	04/27/2010	1500	236.1 (1)
Manganese	0.04	mg/l	Allen Bailey	04/27/2010	1445	243.1 (1)
pH	6.70	s.u.	Danny C. Mays	04/23/2010	1354	150.1 (1)
Report			Sherri Fields	04/30/2010		
Sulfate	57	mg/l	Heath Brown	04/30/2010	0915	8051 (3)
TSS	3	mg/l	Heath Brown	04/27/2010	1610	160.2 (1)

- 1) EPA-600/4-79-020 Revised March 1983
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PERC ENGINEERING CO., INC.  
P.O. Box 1712  
Jasper, Alabama 35502  
(205) 384-5553

Sample Number : 132633  
Client : Riverview Development LLC.  
Facility : Riverview Mine 40 Acre Tract  
Job Number :  
NPDES Permit # :  
Basin, Stream, Well ID: RD4ASW-2  
Code : s  
Date Taken : 05/24/2010  
Sampled By : dcm  
Time Taken : 1515  
Depth or Flow : 0.011cfs  
Tests to be done : pH, Fe, Mn, Cond, SO4, Acid, Alk,  
Report, TSS,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	18	mg/l	Heath Brown	05/25/2010	0900	305.1 (1)
Alkalinity	64	mg/l	Heath Brown	05/25/2010	1000	310.1 (1)
Conductivity	223	umhos	Danny C. Mays	05/24/2010	1515	120.1 (1)
Iron	0.08	mg/l	Allen Bailey	05/28/2010	1420	236.1 (1)
Manganese	0.03	mg/l	Allen Bailey	05/28/2010	1525	243.1 (1)
pH	6.73	s.u.	Danny C. Mays	05/24/2010	1515	150.1 (1)
Report			Sherri Fields	06/01/2010		
Sulfate	52	mg/l	Heath Brown	05/25/2010	1520	8051 (3)
TSS	3	mg/l	Heath Brown	05/25/2010	1100	160.2 (1)

- 1) EPA-600/4-79-020 Revised March 1983
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PERC ENGINEERING CO., INC.  
P.O. Box 1712  
Jasper, Alabama 35502  
(205) 384-5553

Sample Number : 133543  
Client : Riverview Development LLC.  
Facility : Riverview Mine 40 Acre Tract  
Job Number :  
NPDES Permit # :  
Basin, Stream, Well ID: RD4ASW-2  
Code : s  
Date Taken : 06/25/2010  
Sampled By : dcm  
Time Taken : 1116  
Depth or Flow : Dry  
Tests to be done :  
Report,

Parameter	Result	Units	Analyst	Date	Time	Method
Report			Sherri Fields	07/21/2010		

- 1) EPA-600/4-79-020 Revised March 1983
- 2) Standard Methods for the Examination Water and Wastes Water
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- 4) EPA-600/4-88/039 Revised July 1991
- 5) EPA, Test Methods for Evaluating Solid Waste, SW-846, 3rd Edition
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