

**WB MINING, LLC.
FISHTRAP MINE NO. 2
P-3930 / REVISION R-3**

ADDENDUM TO PARTS II-E THROUGH II-H

This Addendum to Parts II-E through II-H is submitted to the Regulatory Authority with the intent of assessing additional impact to local surface and groundwater resources as a result of Revision R-3.

The nature of Revision R-3 for the above referenced mine site consists of: 1) Transfer 74.0 Mining Acres from Increment No. 5 to Increment No. 4 (73.0 acres Mining Area and 1.0 acre for Basin 011P), 2) Add 166.0 Mining Acres to Increment No. 5, 3) Re-evaluate and modify Basins 009E, 009AE Phase I and Phase II, and Basin 006E, 4) Extend Topsoil Variance to include the area added by R-3, 5) Update Operations plan with regard to cut alignment, and 6) Update Reclamation Plan.

The WB Mining, LLC. - Fishtrap No. 2 Mine is a surface mining facility and all coal within to be recovered within the Revision R-3 area will be similar to coal recovery within the original permit area (by the Dozer - Loader method). The target coal seams within the area to be mined as a result of Revision R-3 are the same as those mined at the original facility and are, in descending order, the Pratt, the Nickel Plate, and the American Seams.

Baseline information collected for this addendum includes:

1) Surface water analysis of existing downstream Surface Water Monitoring Site WBF2SW-1 on Fishtrap Branch. The location of this site is shown on the attached Mine Site Location Map. The watershed for this site includes all original permit areas and all areas added by Revision R-3. The data set utilized for this revision at Surface Water Monitoring Site WBF2SW-1 includes samples collected on 18 occasions by the PERC Engineering Laboratory between 07-23-08 and 02-19-13. Parameters tested on all occasions include flowrate, pH, total iron, total manganese, total suspended solids, specific conductance, sulfates, acidity, and alkalinity. See attached results of analysis. All surface water samples collected by the PERC Engineering Laboratory were taken by the 'grab' method. Flowrate measurements collected by the PERC Engineering Laboratory were taken according to ASTM D3858 "Standard Practice for Open Channel Flow Measurement of Water by Velocity - Area Method" or other equally valid methods. All samples analyzed by the PERC Engineering Laboratory are according to ASTM standards.

2) A well inventory conducted by qualified personnel of PERC Engineering Co., Inc. on March 29, 2013. This well inventory serves as an update to the original well inventory conducted on 05-13-96 and would include all residences not previously inventoried within ½ mile of the area added by Revision R-3. The locations of these residences are shown on the attached Mine Site Location Map. **See attached inventory sheets.**

3) Analysis of the well sample taken during the above mentioned well inventory. This sample was collected by the PERC Engineering Laboratory and was taken with either a hand bailer or a submersible pump after development. Water level is measured prior to development. Practices employed by PERC Engineering concerning the volume of groundwater extracted at groundwater monitoring sites prior to sampling is outlined as follows: Where recharge of groundwater is sufficient, three well volumes of groundwater (measured from the static depth) are pumped prior to sampling so the sample obtained is from recharge. Where recharge is slow, and three well volumes cannot be obtained within the monitoring cycle (usually monthly), only one well volume will be pumped. The well will then be allowed to recharge and a sample will be obtained after a volume equal to the volume of the pump line has been discharged. In infrequent instances where recharge is very limited, and the volume of water in the well is too small to be pumped to the surface, a 'bottom sampler' is employed to bail as much water as possible from the well. The well will then be allowed to recharge and the bottom sampler will again be used to obtain a sample when ample groundwater is present to be collected. Depth to water, and pH, are measured in the field, and the sample is split into two separate containers: a 473 ml plastic bottle is acidified and utilized for metals analysis, and a one quart plastic bottle is utilized for all other analysis. Both are stored in an ice chest for transport to the PERC Engineering Laboratory. Samples collected by PERC are taken to the PERC Engineering Laboratory and are analyzed according to ASTM specifications. Parameters tested include pH, iron, manganese, conductivity, sulfates, acidity, and alkalinity. **See attached analysis.**

The results of this analysis will be compared to the sample taken during the original well inventory to determine whether there has been any impact to the well at this time and to help predict the probable future impact to this aquifer and domestic source.

It should be noted that the area added by this revision is contiguous to the existing permit and lies between the Fishtrap No. 2 Mine and the C&H Mining - Lindbergh No. 2 Mine (ASMC permit number P-3765) as shown on the Mine Site Location Map. Also shown on this map are several lithologic, geochemical analysis, and groundwater monitoring sites drilled for the Fishtrap (ASMC permit number P-3813), Fishtrap No. 2, and Lindbergh No. 2 mines . Therefore, these sites should adequately describe the structure, elevation, orientation, lithology, content, and geochemistry of the area added by Revision R-3. Please see the respective Hydrogeologic Report for this information. In addition, because the area added by Revision R-3 is contiguous to the original permit area, and lies between the Fishtrap No. 2 Mine and the Lindbergh No. 2 Mine, there is no reason to suspect that baseline groundwater conditions (including quality, quantity, groundwater movement, and aquifer descriptions) are different for the added area than that which was described in the Hydrogeologic Reports for these two permit areas. Therefore, also please see the respective Hydrogeologic Reports for this information.

The well inventory conducted by PERC Engineering Co., Inc. on March 29, 2013

reveals that there are no more residences within the Revision R-3 area than the original permit area. An update of the well inventory shows that there are still only 3 residences within a ½ mile radius of the post R-3 Fishtrap No. 2 Mine and all three still utilize local groundwater from the same well as their only domestic source. See Mine Site Location Map for their locations.

No additional sediment basins are proposed to be added as a result of this revision.

Baseline data collected at Surface Water Monitoring Site WBF2SW-1 by the PERC Engineering laboratory is attached. Parameters analyzed for this report include pH, Total Iron, Total Manganese, Specific Conductance, Acidity, Alkalinity, and Sulfates. The log values of these parameters (except pH, acidity, and alkalinity) were plotted vs. the corresponding log value of the flow (discharge) using NWA Statpak by Northwest Analytical, Inc. The pH was plotted vs. the log of the flow (discharge) without alteration. The log value of sulfates were plotted vs. the log value of specific conductance. The plots for this site are attached. The data values mentioned above were regressed by the 'least squares' method using the NWA Statpak by Northwest Analytical, Inc. Values for the square of the multiple correlation coefficient (R²), the intercept (a), and the slope (b) for each parameter are shown on each plot. The regression line on the plot is used to predict surface water quality values below the mine site in the receiving stream at specific flowrates before mining by WB Mining, LLC. occurs within the Revision R-3 Area. These specific flows are at the 7Q2, average, and 2 year floods.

The method for calculating the 7Q2 flows in the receiving stream is shown in "Low-Flow Characteristics of Alabama Streams", Geological Survey of Alabama, Bulletin 117. Calculating average flow in the receiving stream is shown in "A Method of Estimating Average Streamflow and Headwater Limits in U.S. Army Corps of Engineers, Mobile District, Alabama and Adjacent States", U.S. Geological Survey, Water-Resources Investigations, Open-File Report 81-59. The method of calculation for the 2 year flow in the receiving stream is shown in "Magnitude and Frequency of Floods in Alabama", Water-Resources Investigations Report 84-4191.

Surface water quality values for baseline conditions (to Revision R-3) at these specific flowrates for Surface Water Monitoring Site WBF2SW-1 is **shown on the attached 'Water Quality & Quantity Projections' page**. Notice that no parameter exceeds EPA effluent limitations at any flowrate (although sulfate concentrations are very high). It should be noted that sulfate concentrations in the data set for the original permit application (prior to mining at this site) was also very high.

Comparisons should also be made between baseline surface water quality in the receiving stream and effluent limitations specified by the Alabama Dept. of Environmental Mgt. for the receiving streams' use classification, which is 'fish and wildlife, as mentioned previously in this report. Chapter 335-6-10 in this reference states the best usage of the 'Fish and 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. According to the same reference, the following water quality restrictions are imposed by ADEM for this use classification: Wastes shall not cause the pH to deviate more than one unit from the normal pH, nor be less than 6.0 or greater than 8.5. The temperature shall not exceed 90 degrees Fahrenheit. Dissolved oxygen concentrations will not be less than 5 mg/l. Only such amounts of toxic substances or taste, odor, and color producing substances will be allowed which will not exhibit acute or chronic toxicity. Fecal coliform will not exceed a geometric mean of 1,000/100ml on a monthly average. Radioactive materials will not exceed the requirements of the State Dept. of Public Health and there shall be no turbidity of other than natural origin that will cause substantial visible contrast with the natural appearance of the waters or interfere with any beneficial uses which they serve. Officials from ADEM were contacted and asked what parameter concentrations would degrade this use classification for parameters not listed in Chapter 335-6-10. They responded that if the parameter is not specifically listed in the above referenced Chapter, baseline quality of the stream would be used to determine whether or not degradation is taking place. As shown on the attached 'Water Quality & Quantity Projections' pages, no baseline value exceeded the effluent limitations listed in Chapter 335-6-10 for these classifications.

Changes to the 'During Mining' water quality estimates for Fishtrap Branch at Surface Water Monitoring Site WBF2SW-1 as a result of Revision R-3 is also given on the attached 'Water Quality & Quantity Projections' page. All estimates for quality and quantity of the receiving stream during the mining of the proposed permit

and revision area are based on: 1) baseline surface water quality (which is different for the Revision R-3 Area due to an updated data set), 2) the increased size of the proposed permit area within this watershed, 3) the drainage area of the watershed of the receiving stream at WBF2SW-1 (which will not change as a result of this revision), 4) the anticipated discharge quality of the sediment basins, and 5) the amount of previous disturbance within the WBF2SW-1 watershed. As shown on the attached 'Water Quality & Quantity Projections' page, the additional mining of the R-3 Area at the Fishtrap No. 2 Mine is expected to decrease the pH, increase mineralization, and increase conductivity, TSS, and sulfate values. A comparison between water quality estimates shown on the attached 'Water Quality & Quantity Projections' page versus estimates from the original hydrogeologic report show that estimated pH's are lower, mineralization is higher, conductivities are, TSS is higher, and sulfate concentrations are higher. This is logical based on the fact that there is a greater percentage of the WBF2SW-1 watershed being disturbed as a result of this revision. These additional changes in surface water quality are not expected to be significant with respect to the use-classification of Fishtrap Branch if the operator complies with state and federal water quality guidelines.

Sediment delivered to the receiving streams from the post Revision R-3 mine site, as estimated by a computer program developed at PERC Engineering Co., Inc. utilizing the Universal Soil Loss Equation (USLE), and modified using conservative values for sediment basin trapping efficiencies and sediment delivery ratios for the receiving streams, should average 614 tons per year before mining begins, 2,999

tons per year during the first year of mining, 3,834 tons per year during the second year of mining, 3,964 tons per year during the third year of mining, 3,915 tons per year during the fourth year of mining, 3,849 tons per year during the fifth year of mining, 1,397 tons per year during the first year after active mining, 496 tons per year in the second year after active mining, 299 tons per year in the third year after active mining but before 100% release of bonds, and 281 tons per year after release of the performance bonds. See attached program results. It may seem odd that the post mining erosion is modeled to be less than the pre-mining condition, however there are two reasons for this phenomenon: 1) a portion of the proposed mine site is previously disturbed and this fact contributes to the pre-mine erosion and 2) the basins at this site are proposed as being permanent, which continue to treat discharge from the proposed permit area, even after bond release. Increases in estimates of sedimentation from the original permit application, and as a result of the addition of the Revision R-3 mining area, are as follows: 721 ton increase per year during the first year of mining, 874 ton increase per year during the second year of mining, 934 ton increase per year during the third year of mining, 940 ton increase per year during the fourth year of mining, 947 ton increase per year during the fifth year of mining, 265 ton increase per year during the first year after active mining, 119 ton increase per year in the second year after active mining, 65 ton increase per year in the third year after active mining but before 100% release of bonds, and 66 ton increase per year after release of the performance bonds as a result of the addition of the Revision R-3 area.

Sediment levels in surface runoff will be controlled by sediment basins as designed in Part III-B of this application. Timely regrading and liming of revegetation as outlined in Part IV of this application will minimize exposure of unweathered overburden and result in conditions which could yield low quality surface water or groundwater discharge. No additional sediment basins are proposed as a part of this revision.

The long term effects of mining the additional area as a result of Revision R-3 by WB Mining, LLC. on surface water quality in the receiving stream is also shown on the attached 'Water Quality & Quantity Projections' page. Post mining estimates are based on: 1) baseline surface water quality, 2) estimated impact during mining, 3) the size of the permit area, 4) the size of the watershed, and 5) the amount of previous disturbance within the watershed. Post mining surface water values will be of generally lower quality as compared to baseline values but the additional impact as a result of this revision will be minimal mainly due to the significant amount of previous disturbance within the watershed prior to the original permit and the fact that the Fishtrap No. 2 permit area occupied 35.29 percent of this watershed prior to Revision R-3.

No significant additional changes in water quantity within the permit area are anticipated due to the affects of mining the additional area under Revision R-3.

No significant additional impacts to groundwater resources are anticipated as a

result of this revision.

As stated above, a well inventory conducted for the Revision R-3 area by PERC Engineering Co., Inc. on 03-29-2013 reveals that there still only 3 residences within a ½ mile radius of the post R-3 Fishtrap No. 2 Mine and all three still utilize local groundwater from the same well as their only domestic source. This well was addressed in the original hydrogeologic report and the following was noted: “.As shown on the attached Mine Site Location Map, residences FT2-1, 2, and 3 are located approximately ½ mile east of the proposed mine site. The residences all utilize the same 110 ft. deep well as their only domestic source. As stated above, for the affected groundwater to migrate off-site through the sandstone unit seen in Groundwater Monitoring Site WBF2MW-1 (the lithologic site which is closest to the well), the top of the post mine spoil aquifer must be at least 119.5 ft. thick. Also as stated above, post mine groundwater levels in the post mine spoil aquifer will be much lower in elevation due to the fracturing of low permeability shale strata, and the creation of large voids in this interval during mining. Even if post mining groundwater levels reach this high, the amount of affected groundwater which migrates off-site should be small based on the fact that 1) post mine groundwater levels fluctuate greatly based on both higher base flow generation (which drains the spoil aquifer) and rainfall amounts and frequency (and all areas of Alabama go through drought conditions during the summer and early fall), and 2) the amount of groundwater migrating into the sandstone interval discussed above would depend upon the top of the post mine spoil aquifer being above the 119.5 ft. thick depth for

a significant amount of time and the rate of migration of affected groundwater into off-site strata would be limited by the hydraulic conductivity of the sandstone in the undisturbed strata. Also, the concentrations of contaminants (H⁺, FeT, MnT, and SO₄) would be much diluted by diffusion by the time affected groundwater had traveled ½ mile. Therefore it is not anticipated that the mining of this proposed permit would significantly affect either the quality or quantity of this well.”

A comparison from the two samples taken from the same well, one collected on 03-28-2009 during the inventory for the original permit area (called FT2-1), and one collected on 03-29-2013 during the inventory for the Revision R-3 area (called FT2R3-1) reveals that there has been no impact to this groundwater resource during the interim. **See attached results of FT2-1 from the original hydrogeologic report.** The sample collected on 03-29-2013 has a higher pH, lower mineralization, similar conductivities, and a lower sulfate concentration than the sample collected on 03-28-2009. This analysis confirms there has been no additional impact to this aquifer from local mining.

The only difference from the original permit to the post R-3 permit area is that the post R-3 permit area will be located approximately 1,300 ft. from the well in question instead of the original one half mile. Based on the fact that the stated dip of the local strata is toward the southeast, that the proposed addition is a minimum of 1,300 feet towards the west, and that, as stated above, the post mine spoil aquifer would have to be more than 119.5 ft. thick for it to intersect the bottom of the FT2R3-1 well, it

is not very likely this local groundwater source will be significantly affected by the mining of the Revision R-3 Area.

However, in the event that it is shown that mining by WB Mining, LLC. has diminished the quality or quantity of this, or other surrounding wells, one of the following methods of replacing the resident's domestic supply will be implemented:

1) an alternative source of groundwater for either shallow groundwater wells or wells with inadequate casing would involve drilling a new well in which the casing would penetrate an aquitard, such as shale, below the lowest target coal seam, and the well would also terminate below the aquitard in water-producing strata, such as sandstone, or 2) connect the residence to an existing municipal water supply, or 3) other methods which replace the groundwater users supply and is agreeable to both the user and the operator will be considered an alternative.

No significant alteration of the drainage area of the receiving stream is anticipated as a result of this revision.

PHC FINDINGS:

The findings of the preceding Determination of the Probable Hydrologic Consequences for the Revision R-3 addition to the WB Mining, LLC. - Fishtrap Mine No. 2 is as follows:

A) Acid or toxic-forming materials: It should be noted that the area added by this revision is contiguous to the existing permit and lies between the Fishtrap No. 2 Mine and the C&H Mining - Lindbergh No. 2 Mine (ASMC permit number P-3765) as shown on the Mine Site Location Map. Also shown on this map are several lithologic, geochemical analysis, and groundwater monitoring sites drilled for the Fishtrap (ASMC permit number P-3813), Fishtrap No. 2, and Lindbergh No. 2 mines . Therefore, these sites should adequately describe the structure, elevation, orientation, lithology, content, and geochemistry of the area added by Revision R-3. Please see the respective Hydrogeologic Report for this information.

B) Adverse impacts to the hydrologic balance:

No significant additional changes in water quantity within the permit area are anticipated due to the affects of mining the additional area under Revision R-3.

C) Contamination, diminution, and interruption of underground or surface source of water used for legitimate purpose on site and adjacent areas:

Surface Water: Changes to the 'During Mining' water quality estimates for Fishtrap Branch at Surface Water Monitoring Site WBF2SW-1 as a result of Revision R-3 is also given on the attached 'Water Quality & Quantity Projections' page. All estimates for quality and quantity of the receiving stream during the mining of the proposed permit and revision area are based on: 1) baseline surface water quality (which is different for the Revision R-3 Area due to an updated data set), 2) the increased size of the proposed permit area within this watershed, 3) the drainage area of the watershed of the receiving stream at WBF2SW-1 (which will not change as a result of this revision), 4) the anticipated discharge quality of the sediment basins, and 5) the amount of previous disturbance within the WBF2SW-1 watershed. As shown on the attached 'Water Quality & Quantity Projections' page, the additional mining of the R-3 Area at the Fishtrap No. 2 Mine is expected to decrease the pH, increase mineralization, and increase conductivity, TSS, and sulfate values. A comparison between water quality estimates shown on the attached 'Water Quality & Quantity Projections' page versus estimates from the original hydrogeologic report show that estimated pH's are lower, mineralization is higher, conductivities are, TSS is higher, and sulfate concentrations are higher. This is logical based on the fact that there is a greater percentage of the WBF2SW-1 watershed being disturbed as a result of this revision. These additional changes in surface water quality are

not expected to be significant with respect to the use-classification of Fishtrap Branch if the operator complies with state and federal water quality guidelines. Groundwater: No significant additional impacts to groundwater resources are anticipated as a result of this revision.

D) Sediment yield from disturbed areas:

As stated in the PHC, sediment delivered to the receiving streams from the post Revision R-3 mine site, as estimated by a computer program developed at PERC Engineering Co., Inc. utilizing the Universal Soil Loss Equation (USLE), and modified using conservative values for sediment basin trapping efficiencies and sediment delivery ratios for the receiving streams, should average 614 tons per year before mining begins, 2,999 tons per year during the first year of mining, 3,834 tons per year during the second year of mining, 3,964 tons per year during the third year of mining, 3,915 tons per year during the fourth year of mining, 3,849 tons per year during the fifth year of mining, 1,397 tons per year during the first year after active mining, 496 tons per year in the second year after active mining, 299 tons per year in the third year after active mining but before 100% release of bonds, and 281 tons per year after release of the performance bonds. See attached program results.

It may seem odd that the post mining erosion is modeled to be less than the pre-mining condition, however there are two reasons for this phenomenon:

1) a portion of the proposed mine site is previously disturbed and this fact contributes to the pre-mine erosion and 2) the basins at this site are

proposed as being permanent, which continue to treat discharge from the proposed permit area, even after bond release. Increases in estimates of sedimentation from the original permit application, and as a result of the addition of the Revision R-3 mining area, are as follows: 721 ton increase per year during the first year of mining, 874 ton increase per year during the second year of mining, 934 ton increase per year during the third year of mining, 940 ton increase per year during the fourth year of mining, 947 ton increase per year during the fifth year of mining, 265 ton increase per year during the first year after active mining, 119 ton increase per year in the second year after active mining, 65 ton increase per year in the third year after active mining but before 100% release of bonds, and 66 ton increase per year after release of the performance bonds as a result of the addition of the Revision R-3 area.

E) Acidity, TSS, TDS, Fe, Mn, pH, other:

See attached 'Water Quality & Quantity Projections' page.

F) Flooding or Streamflow Alterations: None anticipated at this site.

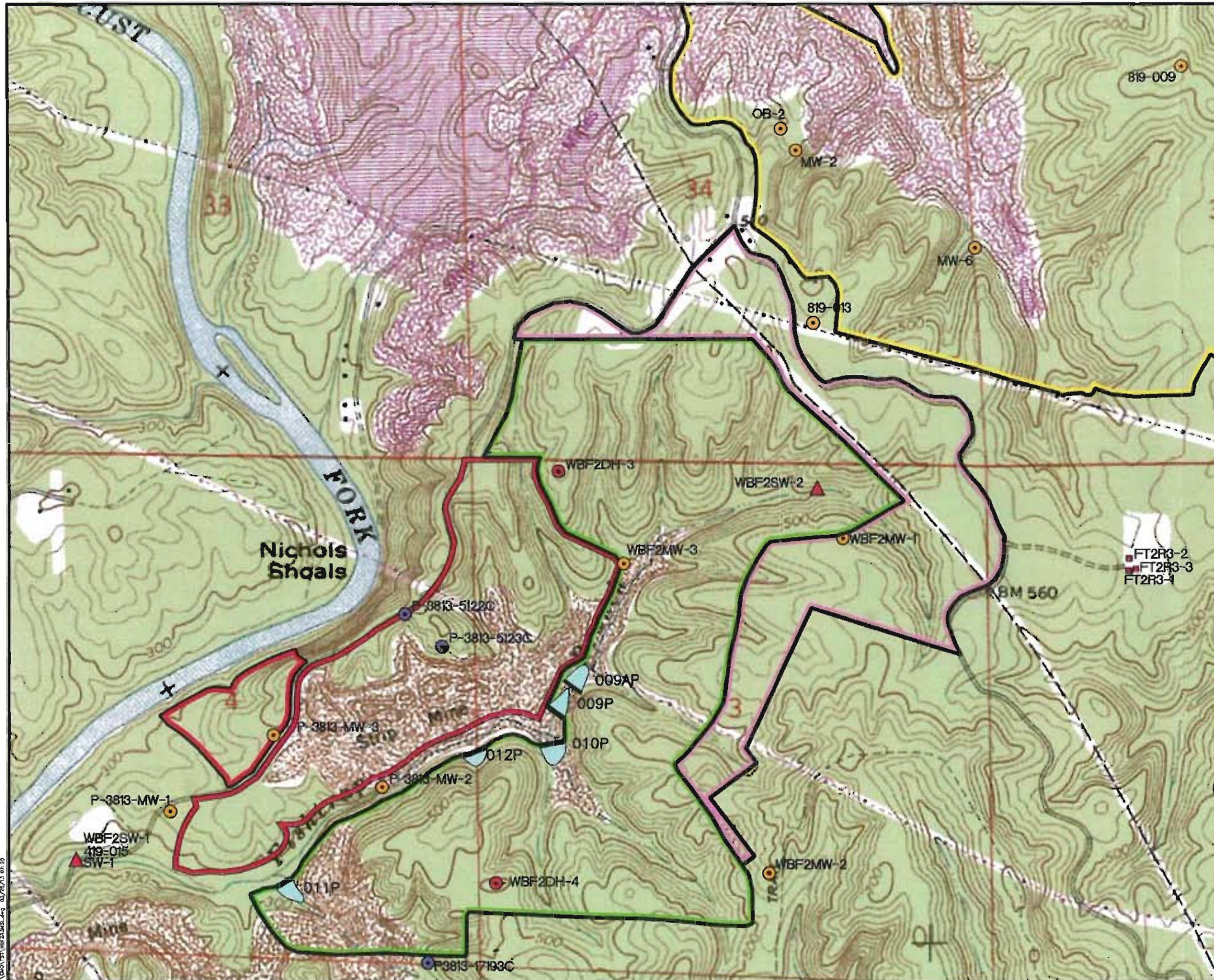
G) Groundwater and Surface Water Availability:

Due to the unconsolidated nature of the post mine strata and the voids present after mining, gravitational forces (as opposed to capillary forces) will play a larger role in influencing infiltrated groundwater movement, therefore

groundwater in the post mine aquifer will have greater availability on average than an unaffected aquifer of identical thickness and extent. Also, lateral groundwater movement in the post mine aquifer will be much greater than prior to mining therefore surface water availability in the receiving stream will increase.

H) Other: No other impacts are anticipated at this site.

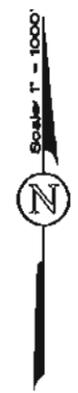
I) Supplemental Information: None required for this mine site.



MAP LEGEND

	Original Permit Boundary
	Fishtrap Mine P-3813
	Revision R-3 Area
	P-3765 Boundary
	Surface Contour
	Sediment Basin
	Previously Surface Mined
	Drill Hole (Lithology only)
	Geochemical Analysis Site
	Groundwater Monitoring Site
	Surface Water Monitoring Site
	Inventoried Residence

NOTE:
BASE MAP TAKEN FROM THE
SYLVAN SPRINGS U.S.G.S.
QUADRANGLE.



WB Mining, LLC.
Fishtrap Mine No. 2
P-3930 / Revision R-3
Mine Site Location Map

DRAWN BY: C.M.O.	DATE: 3-25-13
DWG. NAME: WBF2R3MSL	
APPROVED BY: T.S.T.	SCALE: 1"=1000'

1:10000 (1:25000) 03/25/13 01:20

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

Sample Number : 159514
Client : WB Mining, LLC.
Facility : Fishtrap Mine No. 2 P-3930
Job Number :
NPDES Permit # :
Basin, Stream, Well ID: WBF2SW-1
Code : s
Date Taken : 02/19/2013
Sampled By : dcm
Time Taken : 1340
Depth or Flow : 1.99 *dfs*
Tests to be done : pH, Fe, Mn, Cond, TSS,
Report,

Parameter	Result	Units	Analyst	Date	Time	Method
Conductivity	982	us/cm	Danny C. Mays	02/19/2013	1340	120.1 (1)
Iron	0.16	mg/l	Allen Bailey	03/05/2013	1040	236.1 (1)
Manganese	0.18	mg/l	Allen Bailey	03/05/2013	1255	243.1 (1)
pH	7.51	s.u.	Danny C. Mays	02/19/2013	1340	150.1 (1)
Report			Sherri Fields	03/06/2013		
TSS	1	mg/l	Heath Brown	02/20/2013	0940	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

APPROVED BY: _____

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Sample Number : 156928
Client : WB Mining LLC
Facility : Fishtrap Mine No. 2 P-3930
Job Number :
NPDES Permit # :
Basin, Stream, Well ID: WBF2SW-1
Code : s
Date Taken : 11/01/2012
Sampled By : dcm
Time Taken : 1405
Depth or Flow : 0.170cfs
Tests to be done : pH, Fe, Mn, Cond, TSS,
Report,

Parameter	Result	Units	Analyst	Date	Time	Method
Conductivity	1833	us/cm	Danny C. Mays	11/01/2012	1405	120.1 (1)
Iron	0.12	mg/l	Allen Bailey	11/14/2012	1405	236.1 (1)
Manganese	0.05	mg/l	Allen Bailey	11/14/2012	1430	243.1 (1)
pH	7.82	s.u.	Danny C. Mays	11/01/2012	1405	150.1 (1)
Report			Sherri Fields	11/16/2012		
TSS	2	mg/l	Heath Brown	11/02/2012	1410	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.
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Jasper, Alabama 35502
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Sample Number : 114557
Client : WB Mining, LLC.
Facility : Fishtrap Mine No. 2
Job Number :
NPDES Permit # :
Basin, Stream, Well ID: WBF2SW-1
Code : s
Date Taken : 07/30/2008
Sampled By : swr
Time Taken : 1455
Depth or Flow : 0.742cfs
Tests to be done : pH, Cond, Fe, Mn, SO4, Acid, Alk,
Report, TSS,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	10	mg/l	Heath Brown	08/04/2008	0900	305.1 (1)
Alkalinity	166	mg/l	Heath Brown	08/05/2008	0845	310.1 (1)
Conductivity	1600	umhos	Steve Riddlesperger	07/30/2008	1455	120.1 (1)
Iron	0.23	mg/l	Ryan H. Clement	08/05/2008	1000	236.1 (1)
Manganese	0.06	mg/l	Ryan H. Clement	08/05/2008	1015	243.1 (1)
pH	7.30	s.u.	Steve Riddlesperger	07/30/2008	1455	150.1 (1)
Report			Sherri Fields	08/06/2008		
Sulfate	930	mg/l	Heath Brown	07/31/2008	0830	8051 (3)
TSS	2	mg/l	Heath Brown	07/31/2008	1020	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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Sample Number : 114928
Client : WB Mining, LLC.
Facility : Fishtrap Mine No. 2
Job Number :
NPDES Permit # :
Basin, Stream, Well ID: WBF2SW-1
Code : s
Date Taken : 08/18/2008
Sampled By : swr
Time Taken : 1450
Depth or Flow : 0.404cfs
Tests to be done : pH, Cond, SO4, Acid, Alk, Fe, Mn,
Report, TSS,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	10	mg/l	Heath Brown	08/22/2008	0820	305.1 (1)
Alkalinity	206	mg/l	Heath Brown	08/22/2008	1515	310.1 (1)
Conductivity	1948	umhos	Steve Riddlesperger	08/18/2008	1450	120.1 (1)
Iron	0.32	mg/l	Ryan H. Clement	08/21/2008	1410	236.1 (1)
Manganese	<0.01	mg/l	Ryan H. Clement	08/21/2008	1440	243.1 (1)
pH	7.21	s.u.	Steve Riddlesperger	08/18/2008	1450	150.1 (1)
Report			Sherri Fields	08/25/2008		
Sulfate	990	mg/l	Heath Brown	08/20/2008	0800	8051 (3)
TSS	2	mg/l	Heath Brown	08/20/2008	1615	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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P.O. Box 1712
Jasper, Alabama 35502
(205) 384-5553

Sample Number : 115115
Client : WB Mining, LLC.
Facility : Fishtrap Mine No. 2
Job Number :
NPDES Permit # :
Basin, Stream, Well ID: WBF2SW-1
Code : s
Date Taken : 08/26/2008
Sampled By : swr
Time Taken : 0710
Depth or Flow : 1.658cfs
Tests to be done : pH, TSS, Fe, Mn, SO4, Acid, Alk,
Report, Cond,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	6	mg/l	Heath Brown	08/26/2008	0745	305.1 (1)
Alkalinity	84	mg/l	Heath Brown	08/26/2008	0835	310.1 (1)
Conductivity	917	umhos	Steve Riddlesperger	08/26/2008	0710	120.1 (1)
Iron	0.43	mg/l	Ryan H. Clement	08/28/2008	1600	236.1 (1)
Manganese	0.18	mg/l	Ryan H. Clement	08/28/2008	1625	243.1 (1)
pH	6.54	s.u.	Steve Riddlesperger	08/26/2008	0710	150.1 (1)
Report			Sherri Fields	09/04/2008		
Sulfate	490	mg/l	Heath Brown	08/28/2008	0800	8051 (3)
TSS	6	mg/l	Heath Brown	08/26/2008	1415	160.2 (1)

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

Sample Number : 115360
Client : WB Mining, LLC.
Facility : Fishtrap Mine No. 2
Job Number :
NPDES Permit # :
Basin, Stream, Well ID: WBF2SW-1
Code : s
Date Taken : 09/03/2008
Sampled By : swr
Time Taken : 0920
Depth or Flow : 0.379cfs
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	09/08/2008	0745	305.1 (1)
Alkalinity	178	mg/l	Heath Brown	09/08/2008	0945	310.1 (1)
Conductivity	1895	umhos	Steve Riddlesperger	09/03/2008	0920	120.1 (1)
Iron	0.13	mg/l	Mark Williams	09/11/2008	1532	236.1 (1)
Manganese	0.06	mg/l	Ryan H. Clement	09/11/2008	1602	243.1 (1)
pH	7.14	s.u.	Steve Riddlesperger	09/03/2008	0920	150.1 (1)
Report			Sherri Fields	09/11/2008		
Sulfate	970	mg/l	Heath Brown	09/11/2008	0800	8051 (3)
TSS	3	mg/l	Heath Brown	09/05/2008	1445	160.2 (1)

- 1) EPA-600/4-79-020 Revised March 1983
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(205) 384-5553

Sample Number : 117284
Client : WB Mining, LLC.
Facility : Fishtrap Mine No. 2
Job Number :
NPDES Permit # :
Basin,Stream,Well ID: WBF2SW-1
Code : s
Date Taken : 11/18/2008
Sampled By : swr
Time Taken : 1355
Depth or Flow : 1.161cfs
Tests to be done : pH, Fe, Mn, Cond, Acid, Alk, SO4,
Report, TSS,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	8	mg/l	Heath Brown	11/20/2008	0810	305.1 (1)
Alkalinity	162	mg/l	Heath Brown	11/20/2008	1445	310.1 (1)
Conductivity	1816	umhos	Steve Riddlesperger	11/18/2008	1355	120.1 (1)
Iron	0.10	mg/l	Mark Williams	11/26/2008	1551	236.1 (1)
Manganese	0.05	mg/l	Mark Williams	11/26/2008	1612	243.1 (1)
pH	6.62	s.u.	Steve Riddlesperger	11/18/2008	1355	150.1 (1)
Report			Sherri Fields	12/01/2008		
Sulfate	920	mg/l	Heath Brown	11/20/2008	1550	8051 (3)
TSS	2	mg/l	Heath Brown	11/20/2008	1340	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 : 118345
Client : WB Mining, LLC.
Facility : Fishtrap Mine No. 2
Job Number :
NPDES Permit # :
Basin, Stream, Well ID: WBF2SW-1
Code : s
Date Taken : 12/30/2008
Sampled By : dcm
Time Taken : 1515
Depth or Flow : 2.432cfs
Tests to be done : pH, Fe, Mn, Cond, SO4, Acid, Alk,
Report, TSS,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	12	mg/l	Heath Brown	01/02/2009	0805	305.1 (1)
Alkalinity	166	mg/l	Heath Brown	01/02/2009	1310	310.1 (1)
Conductivity	931	umhos	Danny C. Mays	12/30/2008	1515	120.1 (1)
Iron	0.42	mg/l	Mark Williams	01/13/2009	0935	236.1 (1)
Manganese	0.10	mg/l	Mark Williams	01/13/2009	1025	243.1 (1)
pH	7.89	s.u.	Danny C. Mays	12/30/2008	1515	150.1 (1)
Report			Sherri Fields	01/13/2009		
Sulfate	890	mg/l	Heath Brown	01/02/2009	1445	8051 (3)
TSS	1	mg/l	Heath Brown	12/31/2008	0925	160.2 (1)

- 1) EPA-600/4-79-020 Revised March 1983
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Jasper, Alabama 35502
(205) 384-5553

Sample Number : 118897
Client : WB Mining, LLC.
Facility : Fishtrap Mine No. 2
Job Number :
NPDES Permit # :
Basin, Stream, Well ID: WBF2SW-1
Code : s
Date Taken : 01/19/2009
Sampled By : dcm
Time Taken : 0950
Depth or Flow : 3.012cfs
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	01/26/2009	0830	305.1 (1)
Alkalinity	170	mg/l	Heath Brown	01/26/2009	1045	310.1 (1)
Conductivity	1716	umhos	Heath Brown	01/22/2009	0750	120.1 (1)
Iron	0.16	mg/l	Ryan H. Clement	02/03/2009	1035	236.1 (1)
Manganese	0.19	mg/l	Ryan H. Clement	02/03/2009	1135	243.1 (1)
pH	8.22	s.u.	Danny C. Mays	01/19/2009	0950	150.1 (1)
Report			Sherri Fields	02/03/2009		
Sulfate	870	mg/l	Heath Brown	01/21/2009	0955	8051 (3)
TSS	3	mg/l	Heath Brown	01/20/2009	1100	160.2 (1)

- 1) EPA-600/4-79-020 Revised March 1983
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P.O. Box 1712
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(205) 384-5553

Sample Number : 119618
Client : WB Mining, LLC.
Facility : Fishtrap Mine No. 2
Job Number :
NPDES Permit # :
Basin, Stream, Well ID: WBF2SW-1
Code : s
Date Taken : 02/16/2009
Sampled By : dcm
Time Taken : 1240
Depth or Flow : 1.212cfs
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	02/20/2009	0800	305.1 (1)
Alkalinity	164	mg/l	Heath Brown	02/20/2009	0945	310.1 (1)
Conductivity	1734	umhos	Heath Brown	02/23/2009	0900	120.1 (1)
Iron	0.17	mg/l	Mark Williams	02/19/2009	1545	236.1 (1)
Manganese	0.28	mg/l	Mark Williams	02/19/2009	1611	243.1 (1)
pH	8.00	s.u.	Danny C. Mays	02/16/2009	1240	150.1 (1)
Report			Sherri Fields	02/23/2009		
Sulfate	650	mg/l	Danny C. Mays	04/01/2009	1540	8051 (3)
TSS	4	mg/l	Heath Brown	02/18/2009	0900	160.2 (1)

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(205) 384-5553

Sample Number : 120535
Client : WB Mining, LLC.
Facility : Fishtrap Mine No. 2
Job Number :
NPDES Permit # :
Basin, Stream, Well ID: WBF2SW-1
Code : s
Date Taken : 03/23/2009
Sampled By : dcm
Time Taken : 1324
Depth or Flow : 1.398cfs
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	03/27/2009	0745	305.1 (1)
Alkalinity	158	mg/l	Heath Brown	03/27/2009	0955	310.1 (1)
Conductivity	894	umhos	Danny C. Mays	03/23/2009	1324	120.1 (1)
Iron	0.17	mg/l	Ryan H. Clement	03/28/2009	1040	236.1 (1)
Manganese	0.18	mg/l	Ryan H. Clement	03/28/2009	1147	243.1 (1)
pH	7.19	s.u.	Danny C. Mays	03/23/2009	1324	150.1 (1)
Report			Sherri Fields	03/30/2009		
Sulfate	430	mg/l	Heath Brown	03/25/2009	0745	8051 (3)
TSS	1	mg/l	Heath Brown	03/24/2009	0940	160.2 (1)

- 1) EPA-600/4-79-020 Revised March 1983
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(205) 384-5553

Sample Number : 143927
Client : WB Mining, LLC.
Facility : Fishtrap Mine No. 2 P-3930
Job Number :
NPDES Permit # :
Basin, Stream, Well ID: WBF2SW-1
Code : s
Date Taken : 06/10/2011
Sampled By : swr
Time Taken : 1452
Depth or Flow : 0.523cfs
Tests to be done : pH, Cond, Fe, Mn, TSS,
Report,

Parameter	Result	Units	Analyst	Date	Time	Method
Conductivity	2120	us/cm	Heath Brown	06/21/2011	0800	120.1 (1)
Iron	0.14	mg/l	Allen Bailey	06/14/2011	1320	236.1 (1)
Manganese	0.12	mg/l	Allen Bailey	06/14/2011	1405	243.1 (1)
pH	7.90	s.u.	Steve Riddlesperger	06/10/2011	1452	150.1 (1)
Report			Sherri Fields	06/22/2011		
TSS	6	mg/l	Heath Brown	06/13/2011	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
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PERC ENGINEERING CO., INC.
P.O. Box 1712
Jasper, Alabama 35502
(205) 384-5553

Sample Number : 146503
Client : WB Mining, LLC.
Facility : Fishtrap Mine P-3930
Job Number :
NPDES Permit # :
Basin,Stream,Well ID: WBF2SW-1
Code : s
Date Taken : 09/16/2011
Sampled By : swr
Time Taken : 1214
Depth or Flow : 1.383cfs
Tests to be done : pH, Fe, Mn, Cond, TSS,
Report,

Parameter	Result	Units	Analyst	Date	Time	Method
Conductivity	1096	us/cm	Danny C. Mays	09/23/2011	1310	120.1 (1)
Iron	0.27	mg/l	Allen Bailey	09/30/2011	1530	236.1 (1)
Manganese	0.21	mg/l	Allen Bailey	09/30/2011	1600	243.1 (1)
pH	6.22	s.u.	Steve Riddlesperger	09/16/2011	1214	150.1 (1)
Report			Sherri Fields	10/04/2011		
TSS	5	mg/l	Heath Brown	09/20/2011	1510	160.2 (1)

- 1) EPA-600/4-79-020 Revised March 1983
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Jasper, Alabama 35502
(205) 384-5553

Sample Number : 149273
Client : WB Mining, LLC.
Facility : Fishtrap Mine P-3930
Job Number :
NPDES Permit # :
Basin, Stream, Well ID: WBF2SW-1
Code : s
Date Taken : 12/15/2011
Sampled By : mlb
Time Taken : 1012
Depth or Flow : 0.602cfs
Tests to be done : pH, TSS, Fe, Mn, Cond,
Report,

Parameter	Result	Units	Analyst	Date	Time	Method
Conductivity	1207	us/cm	Heath Brown	12/20/2011	1525	120.1 (1)
Iron	0.11	mg/l	Allen Bailey	12/23/2011	1320	236.1 (1)
Manganese	0.09	mg/l	Allen Bailey	12/23/2011	1350	243.1 (1)
pH	8.04	s.u.	Mike Boissel	12/15/2011	1012	150.1 (1)
Report			Sherri Fields	12/28/2011		
TSS	1	mg/l	Heath Brown	12/16/2011	1420	160.2 (1)

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Jasper, Alabama 35502
(205) 384-5553

Sample Number : 150173
Client : WB Mining, LLC.
Facility : Fishtrap Mine No. 2 P-3930
Job Number :
NPDES Permit # :
Basin, Stream, Well ID: WBF2SW-1
Code : s
Date Taken : 01/20/2012
Sampled By : mlb
Time Taken : 1148
Depth or Flow : 1.590cfs
Tests to be done : pH, Fe, Mn, Cond, TSS,
Report,

Parameter	Result	Units	Analyst	Date	Time	Method
Conductivity	984	us/cm	Mike Boissel	01/20/2012	1148	120.1 (1)
Iron	0.13	mg/l	Allen Bailey	02/03/2012	0930	236.1 (1)
Manganese	0.12	mg/l	Allen Bailey	02/03/2012	0950	243.1 (1)
pH	7.74	s.u.	Mike Boissel	01/20/2012	1148	150.1 (1)
Report			Sherri Fields	02/02/2012		
TSS	1	mg/l	Heath Brown	01/24/2012	1115	160.2 (1)

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P.O. Box 1712
Jasper, Alabama 35502
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Sample Number : 152042
Client : WB Mining, LLC.
Facility : Fishtrap Mine No. 2 P-3930
Job Number :
NPDES Permit # :
Basin, Stream, Well ID: WBF2SW-1
Code : s
Date Taken : 04/06/2012
Sampled By : mlb
Time Taken : 1334
Depth or Flow : 1.230cfs
Tests to be done : pH, Fe, Mn, Cond, TSS,
Report,

Parameter	Result	Units	Analyst	Date	Time	Method
Conductivity	901	us/cm	Heath Brown	04/10/2012	0850	120.1 (1)
Iron	0.26	mg/l	Allen Bailey	04/12/2012	1150	236.1 (1)
Manganese	0.12	mg/l	Allen Bailey	04/12/2012	1215	243.1 (1)
pH	7.61	s.u.	Mike Boissel	04/06/2012	1337	150.1 (1)
Report			Sherri Fields	04/12/2012		
TSS	3	mg/l	Heath Brown	04/09/2012	1355	160.2 (1)

- 1) EPA-600/4-79-020 Revised March 1983
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Jasper, Alabama 35502
(205) 384-5553

Sample Number : 155458
Client : WB Mining, LLC.
Facility : Fishtrap Mine No. 2 P-3930
Job Number :
NPDES Permit # :
Basin,Stream,Well ID: WBF2SW-1
Code : s
Date Taken : 08/21/2012
Sampled By : dcm
Time Taken : 1440
Depth or Flow : 0.12 cfs
Tests to be done : pH, Fe, Mn, Cond, TSS,
Report,

Parameter	Result	Units	Analyst	Date	Time	Method
Conductivity	1880	us/cm	Danny C. Mays	08/21/2012	1440	120.1 (1)
Iron	0.14	mg/l	Allen Bailey	09/19/2012	1155	236.1 (1)
Manganese	0.07	mg/l	Allen Bailey	09/19/2012	1230	243.1 (1)
pH	7.66	s.u.	Danny C. Mays	08/21/2012	1440	150.1 (1)
Report			Sherri Fields	09/19/2012		
TSS	1	mg/l	Heath Brown	08/23/2012	1045	160.2 (1)

- 1) EPA-600/4-79-020 Revised March 1983
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W.B. Mining, LLC - Fishtrap No. 2 / R-3 Well Inventory

MAP I.D.: FT2R3-1

INVENTORIED BY: MLB

DATE: 03-29-02013

OWNER: Linda Vance

ADDRESS: 2947 Porter Road, Adamsville, AL 35505

PHONE: 674-8334

OF OCCUPANTS: 1

SOURCE OF WATER

PRIVATE	PUBLIC	WATER AUTHORITY
W		

W = WELL / S = SPRING / O = OTHER / F = FILTER

WELL INFORMATION

DEPTH TO WATER: _____ REPORTED: _____ MEASURED: _____

DEPTH TO BOTTOM: 110 ft. REPORTED: X MEASURED: _____

USAGE OF WELL: Primary Domestic Source

SAMPLE INFORMATION

WAS SAMPLE FILTERED? (YES X) (NO ___) pH OF SAMPLE: _____

WATER QUALITY (Reported by owner / user): GOOD:___ FAIR:___ BAD:___

IF FAIR OR BAD, DESCRIBE PROBLEM. (TASTE, COLOR, **ODOR**, QUANTITY, **STAINS** ETC.) _____

COMMENTS: Well Supplies 3 homes. Filter on system for Fecal Coliform.

W.B. Mining, LLC - Fishtrap No. 2 / R-3

Well Inventory

MAP I.D.: FT2R3-2

INVENTORIED BY: MLB

DATE: 03-29-02013

OWNER: Nadine Forrester

ADDRESS: 2925 Porter Road, Adamsville, AL 35505

PHONE: _____

OF OCCUPANTS: 1

SOURCE OF WATER

PRIVATE	PUBLIC	WATER AUTHORITY
W		

W = WELL / S = SPRING / O = OTHER / F = FILTER

WELL INFORMATION

DEPTH TO WATER: _____ REPORTED: _____ MEASURED: _____

DEPTH TO BOTTOM: 110 ft. REPORTED: X MEASURED: _____

USAGE OF WELL: Primary Domestic Source

SAMPLE INFORMATION

WAS SAMPLE FILTERED? (YES X) (NO ___) pH OF SAMPLE: _____

WATER QUALITY (Reported by owner / user): GOOD:___ FAIR:___ BAD:___

IF FAIR OR BAD, DESCRIBE PROBLEM. (TASTE, COLOR, **ODOR**, QUANTITY, **STAINS** ETC.)

COMMENTS: Well same as FT2R3-1 water supply.

W.B. Mining, LLC - Fishtrap No. 2 / R-3 Well Inventory

MAP I.D.: FT2R3-3

INVENTORIED BY: MLB

DATE: 03-29-02013

OWNER: Nadine Forrester

ADDRESS: 2933 Porter Road, Adamsville, AL 35505

PHONE: 674-8334

OF OCCUPANTS: 1

SOURCE OF WATER

PRIVATE	PUBLIC	WATER AUTHORITY
W		

W = WELL / S = SPRING / O = OTHER / F = FILTER

WELL INFORMATION

DEPTH TO WATER: _____ REPORTED: _____ MEASURED: _____

DEPTH TO BOTTOM: 110 ft. REPORTED: X MEASURED: _____

USAGE OF WELL: Primary Domestic Source

SAMPLE INFORMATION

WAS SAMPLE FILTERED? (YES X) (NO) pH OF SAMPLE: _____

WATER QUALITY (Reported by owner / user): GOOD: FAIR: BAD:

IF FAIR OR BAD, DESCRIBE PROBLEM. (TASTE, COLOR, **ODOR**, QUANTITY, **STAINS** ETC.)

COMMENTS: Well same as FT2R3-1 water supply.

PERC ENGINEERING CO., INC.
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(205) 384-5553

Sample Number : 120764
Client : WB Mining, LLC.
Facility : Fishtrap Mine No. 2
Job Number :
NPDES Permit # :
Basin,Stream,Well ID: FT2-1
Code : w
Date Taken : 03/28/2009
Sampled By : dcm
Time Taken : 1045
Depth or Flow :
Tests to be done : pH, Cond, Fe, Mn, SO4, Acid, Alk,
Report,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	6	mg/l	Heath Brown	03/30/2009	0910	305.1 (1)
Alkalinity	28	mg/l	Heath Brown	03/30/2009	1050	310.1 (1)
Conductivity	130	umhos	Danny C. Mays	03/28/2009	1045	120.1 (1)
Iron	0.11	mg/l	Mark Williams	04/07/2009	1550	236.1 (1)
Manganese	0.03	mg/l	Mark Williams	04/07/2009	1610	243.1 (1)
pH	6.05	s.u.	Danny C. Mays	03/28/2009	1045	150.1 (1)
Report			Sherri Fields	04/08/2009		
Sulfate	11	mg/l	Heath Brown	03/30/2009	1410	8051 (3)

- 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

APPROVED BY: Mark Williams

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

Sample Number : 160449
Client : WB Mining, LLC.
Facility : Fishtrap Mine No. 2 P-3930
Job Number :
NPDES Permit # :
Basin,Stream,Well ID: FT2R3-1
Code : w
Date Taken : 03/29/2013
Sampled By : mlb
Time Taken : 1345
Depth or Flow : 110'
Tests to be done : pH, Cond, Fe, Mn, SO4, Acid, Alk,
Report,

Parameter	Result	Units	Analyst	Date	Time	Method
Acidity	18	mg/l	Heath Brown	04/05/2013	0800	305.1 (1)
Alkalinity	34	mg/l	Heath Brown	04/05/2013	0855	310.1 (1)
Conductivity	140	us/cm	Heath Brown	04/02/2013	0800	120.1 (1)
Iron	<0.03	mg/l	Allen Bailey	04/02/2013	1155	236.1 (1)
Manganese	<0.04	mg/l	Allen Bailey	04/02/2013	1210	243.1 (1)
pH	6.25	s.u.	Mike Boissel	03/29/2013	1345	150.1 (1)
Report			Sherri Fields	04/05/2013		
Sulfate	8	mg/l	Heath Brown	04/05/2013	1205	8051 (3)

- 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

APPROVED BY: *Mark Williams*

Company :WB MINING LLC
Mine Name :FISHTRAP NO 2 REVISION 3

Number of mining acres permitted : 581
Number of years permitted : 5
Acres to be mined per quarter : 29.05
Mining begins in Quarter 2 of 2013 .

Pre-Mining Land Use Summary.....

	Land Use Category	Acres	% Total	Avg Slope	Cp	K
1	Pre-lav Disturbance	80	13.76 %	25 %	.045	.26
2	Forest (natural)	501	86.23 %	27.5 %	.001	.29

Pre, During & Post-Mining Land Use Summary.....

	Land Use Category	Cp	K	Avg Slope
1	Premining Area	.007	.285	27.15 %
2	Clearing & Grubbing	.45	.26	27.15 %
3	Active Mining	1	.24	33 %
4	Regraded Area	.9	.24	31.22 %
5	Planted 0-90 days	.4	.26	31.22 %
6	Planted 90 days-2yrs	.05	.26	31.22 %
7	Permanent Revegetated	.01	.26	31.22 %

General Information.....

Grass will be used for terminal revegetation.
Topsoil waiver has been granted.
Sediment Basins are permanent structures.
Sediment Basin Trapping Efficiency : 82.49 %
Drainage Area of Probable Hydrologic Consequence : 1.89 sq.mi.
Average post-mining slope is assumed to be 1.15 X avg pre-mining slope.
'R' value to be used in the Universal Soil Loss Equation : 350
Sediment Delivery Ratio = .2547
Average area to be cleared and grubbed at any time : 2 Ac.
Maximum time land may remain ungraded : 3 months.
Percent of Pre-Mining Area routed through Basin 0 %

Begin Quarterly Analysis On Next Page...

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PHC point (tons)
1 Premining Area	581	651.1	No	651.1	165.83
2 Clearing & Grubbing	0	0	No	0	0
3 Active Mining	0	0	No	0	0
4 Regraded Area	0	0	No	0	0
5 Planted 0-90 days	0	0	No	0	0
6 Planted 90 days-2yrs	0	0	No	0	0
7 Permanent Revegetated	0	0	No	0	0

Total Soil Loss Delivered to PHC Point this Quarter: 165.83 tons.

Quarter : 3 Year : 2012

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PHC point (tons)
1 Premining Area	581	916.37	No	916.37	233.4
2 Clearing & Grubbing	0	0	No	0	0
3 Active Mining	0	0	No	0	0
4 Regraded Area	0	0	No	0	0
5 Planted 0-90 days	0	0	No	0	0
6 Planted 90 days-2yrs	0	0	No	0	0
7 Permanent Revegetated	0	0	No	0	0

Total Soil Loss Delivered to PHC Point this Quarter: 233.4 tons.

Quarter : 4 Year : 2012

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PHC point (tons)
1 Premining Area	581	409.95	No	409.95	104.41
2 Clearing & Grubbing	0	0	No	0	0
3 Active Mining	0	0	No	0	0
4 Regraded Area	0	0	No	0	0
5 Planted 0-90 days	0	0	No	0	0
6 Planted 90 days-2yrs	0	0	No	0	0
7 Permanent Revegetated	0	0	No	0	0

Total Soil Loss Delivered to PHC Point this Quarter: 104.41 tons.

Quarter : 1 Year : 2013

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PHC point (tons)
1 Premining Area	581	434.07	No	434.07	110.55
2 Clearing & Grubbing	0	0	No	0	0
3 Active Mining	0	0	No	0	0
4 Regraded Area	0	0	No	0	0
5 Planted 0-90 days	0	0	No	0	0
6 Planted 90 days-2yrs	0	0	No	0	0
7 Permanent Revegetated	0	0	No	0	0

Total Soil Loss Delivered to PHC Point this Quarter: 110.55 tons.

Total Soil Loss Delivered to PHC Point during Previous Year: 614.21 tons

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PHC point (tons)
1 Premining Area	551.9	618.55	No	618.55	157.54
2 Clearing & Grubbing	2	209.92	Yes	36.73	9.35
3 Active Mining	27	8016.04	Yes	1402.8	357.29
4 Regraded Area	0	0	Yes	0	0
5 Planted 0-90 days	0	0	Yes	0	0
6 Planted 90 days-2yrs	0	0	Yes	0	0
7 Permanent Revegetated	0	0	Yes	0	0

Total Soil Loss Delivered to PHC Point this Quarter: 524.19 tons.

Quarter : 3 Year : 2013

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PHC point (tons)
1 Premining Area	522.9	924.73	No	924.73	210.06
2 Clearing & Grubbing	2	295.44	Yes	51.7	13.16
3 Active Mining	29	12115.98	Yes	2120.29	540.03
4 Regraded Area	27	9280.43	Yes	1624.07	413.65
5 Planted 0-90 days	0	0	Yes	0	0
6 Planted 90 days-2yrs	0	0	Yes	0	0
7 Permanent Revegetated	0	0	Yes	0	0

Total Soil Loss Delivered to PHC Point this Quarter: 1176.92 tons.

Quarter : 4 Year : 2013

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PHC point (tons)
1 Premining Area	493.8	348.46	No	348.46	88.75
2 Clearing & Grubbing	2	132.17	Yes	23.13	5.89
3 Active Mining	29	5420.3	Yes	948.55	241.59
4 Regraded Area	29	4453.74	Yes	780.27	198.73
5 Planted 0-90 days	27	1999	Yes	349.82	89.1
6 Planted 90 days-2yrs	0	0	Yes	0	0
7 Permanent Revegetated	0	0	Yes	0	0

Total Soil Loss Delivered to PHC Point this Quarter: 624.07 tons.

Quarter : 1 Year : 2014

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PHC point (tons)
1 Premining Area	464.7	347.25	No	347.25	88.44
2 Clearing & Grubbing	2	139.94	Yes	24.49	6.23
3 Active Mining	29	5739.14	Yes	1004.35	255.8
4 Regraded Area	29	4721.01	Yes	826.17	210.42
5 Planted 0-90 days	29	2273.08	Yes	397.78	101.31
6 Planted 90 days-2yrs	27	264.57	Yes	46.3	11.79
7 Permanent Revegetated	0	0	Yes	0	0

Total Soil Loss Delivered to PHC Point this Quarter: 674.02 tons.

Total Soil Loss Delivered to PHC Point during Previous Year: 2999.22 tons

Quarter : 2 Year : 2014

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	435.7	488.33	No	488.33	124.97
2 Clearing & Grubbing	2	209.92	Yes	36.73	9.35
3 Active Mining	29	8608.72	Yes	1506.52	383.71
4 Regraded Area	29	7081.52	Yes	1239.26	315.64
5 Planted 0-90 days	29	3409.62	Yes	596.68	151.97
6 Planted 90 days-2yrs	56.1	823.06	Yes	144.03	36.68
7 Permanent Revegetated	0	0	Yes	0	0

Total Soil Loss Delivered to PNC Point this Quarter: 1021.75 tons.

Quarter : 3 Year : 2014

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	405.7	641.46	No	641.46	153.38
2 Clearing & Grubbing	2	295.44	Yes	51.7	13.16
3 Active Mining	29	12115.98	Yes	2120.29	540.03
4 Regraded Area	29	9966.59	Yes	1744.15	444.23
5 Planted 0-90 days	29	4798.73	Yes	839.77	213.89
6 Planted 90 days-2yrs	85.1	1758.22	Yes	307.68	78.36
7 Permanent Revegetated	0	0	Yes	0	0

Total Soil Loss Delivered to PNC Point this Quarter: 1453.68 tons.

Quarter : 4 Year : 2014

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	377.6	266.47	No	266.47	67.87
2 Clearing & Grubbing	2	132.17	Yes	23.13	5.89
3 Active Mining	29	5420.3	Yes	949.55	241.59
4 Regraded Area	29	4458.74	Yes	780.27	198.73
5 Planted 0-90 days	29	2145.8	Yes	375.69	95.68
6 Planted 90 days-2yrs	114.1	1054.92	Yes	184.61	47.02
7 Permanent Revegetated	0	0	Yes	0	0

Total Soil Loss Delivered to PNC Point this Quarter: 656.8 tons.

Quarter : 1 Year : 2015

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	348.6	260.44	No	260.44	66.33
2 Clearing & Grubbing	2	139.94	Yes	24.49	6.23
3 Active Mining	29	5739.14	Yes	1004.35	255.8
4 Regraded Area	29	4721.02	Yes	826.17	210.42
5 Planted 0-90 days	29	2273.08	Yes	397.78	101.31
6 Planted 90 days-2yrs	143.2	1401.11	Yes	245.19	62.45
7 Permanent Revegetated	0	0	Yes	0	0

Total Soil Loss Delivered to PNC Point this Quarter: 702.57 tons.

Total Soil Loss Delivered to PNC Point during Previous Year: 3834.21 tons

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	319.5	358.1	No	358.1	91.21
2 Clearing & Grubbing	2	209.92	Yes	36.73	9.35
3 Active Mining	29	8608.72	Yes	1506.52	383.71
4 Regraded Area	29	7091.52	Yes	1239.26	315.64
5 Planted 0-90 days	29	3409.62	Yes	596.68	151.97
6 Planted 90 days-2yrs	172.2	2527.87	Yes	442.37	112.67
7 Permanent Revegetated	0	0	Yes	0	0

Total Soil Loss Delivered to PNC Point this Quarter: 1064.57 tons.

Quarter : 3 Year : 2015

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	290.5	458.18	No	458.18	116.7
2 Clearing & Grubbing	2	295.44	Yes	51.7	13.16
3 Active Mining	29	12115.97	Yes	2120.29	540.03
4 Regraded Area	29	9966.59	Yes	1744.15	444.23
5 Planted 0-90 days	29	4798.73	Yes	839.77	213.89
6 Planted 90 days-2yrs	201.3	4157.59	Yes	727.57	185.31
7 Permanent Revegetated	0	0	Yes	0	0

Total Soil Loss Delivered to PNC Point this Quarter: 1513.35 tons.

Quarter : 4 Year : 2015

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	261.4	184.48	No	184.48	46.32
2 Clearing & Grubbing	2	132.17	Yes	23.13	5.89
3 Active Mining	29	5420.3	Yes	948.55	241.59
4 Regraded Area	29	4458.73	Yes	780.27	198.73
5 Planted 0-90 days	29	2146.8	Yes	375.69	95.68
6 Planted 90 days-2yrs	203.3	1878.45	Yes	328.72	83.72
7 Permanent Revegetated	27	49.97	Yes	8.74	2.22

Total Soil Loss Delivered to PNC Point this Quarter: 674.85 tons.

Quarter : 1 Year : 2016

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	232.4	173.62	No	173.62	44.22
2 Clearing & Grubbing	2	139.94	Yes	24.49	6.23
3 Active Mining	29	5739.14	Yes	1004.35	255.8
4 Regraded Area	29	4721.01	Yes	826.17	210.42
5 Planted 0-90 days	29	2273.08	Yes	397.70	101.31
6 Planted 90 days-2yrs	203.3	1988.94	Yes	348.06	88.65
7 Permanent Revegetated	56	109.74	Yes	19.2	4.89

Total Soil Loss Delivered to PNC Point this Quarter: 711.55 tons.

Total Soil Loss Delivered to PNC Point during Previous Year: 3964.33 tons

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	203.3	227.88	No	227.88	56.04
2 Clearing & Grubbing	2	209.92	Yes	36.73	9.35
3 Active Mining	29	8508.71	Yes	1506.52	383.71
4 Regraded Area	29	7081.52	Yes	1239.26	315.54
5 Planted 0-90 days	29	3409.52	Yes	596.68	151.97
6 Planted 90 days-2yrs	203.3	2983.42	Yes	522.02	132.97
7 Permanent Revegetated	85.1	249.85	Yes	43.72	11.13

Total Soil Loss Delivered to PNC Point this Quarter: 1062.84 tons.

Quarter : 3 Year : 2016

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	174.3	274.91	No	274.91	70.02
2 Clearing & Grubbing	2	296.44	Yes	51.7	13.16
3 Active Mining	29	12115.97	Yes	2120.29	540.03
4 Regraded Area	29	9966.59	Yes	1744.15	444.23
5 Planted 0-90 days	29	4798.72	Yes	839.77	213.89
6 Planted 90 days-2yrs	203.3	4198.88	Yes	734.8	187.15
7 Permanent Revegetated	114.1	471.61	Yes	82.53	21.02

Total Soil Loss Delivered to PNC Point this Quarter: 1489.53 tons.

Quarter : 4 Year : 2016

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	145.2	102.48	No	102.48	26.1
2 Clearing & Grubbing	2	132.17	Yes	23.13	5.89
3 Active Mining	29	5420.3	Yes	948.55	241.59
4 Regraded Area	29	4458.73	Yes	780.27	198.73
5 Planted 0-90 days	29	2146.8	Yes	375.69	95.68
6 Planted 90 days-2yrs	203.3	1878.45	Yes	329.72	83.72
7 Permanent Revegetated	143.2	264.65	Yes	46.31	11.79

Total Soil Loss Delivered to PNC Point this Quarter: 663.54 tons.

Quarter : 1 Year : 2017

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	116.2	86.81	No	86.81	22.11
2 Clearing & Grubbing	2	139.94	Yes	24.49	6.23
3 Active Mining	29	5739.14	Yes	1004.35	255.0
4 Regraded Area	29	4721.01	Yes	826.17	210.42
5 Planted 0-90 days	29	2273.08	Yes	397.78	101.31
6 Planted 90 days-2yrs	203.3	1988.94	Yes	348.96	88.65
7 Permanent Revegetated	172.2	337.04	Yes	58.98	15.02

Total Soil Loss Delivered to PNC Point this Quarter: 699.57 tons.

Total Soil Loss Delivered to PNC Point during Previous Year: 3915.49 tons

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PHC point (tons)
1 Premining Area	87.1	97.66	No	97.66	24.87
2 Clearing & Grubbing	2	209.92	Yes	36.73	9.35
3 Active Mining	29	8608.71	Yes	1506.52	388.71
4 Regraded Area	29	7081.52	Yes	1239.26	315.64
5 Planted 0-90 days	29	3409.62	Yes	596.68	151.97
6 Planted 90 days-2yrs	203.3	2983.42	Yes	522.09	132.97
7 Permanent Revegetated	261.3	590.81	Yes	103.39	26.33

Total Soil Loss Delivered to PHC Point this Quarter: 1044.87 tons.

Quarter : 3 Year : 2017

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PHC point (tons)
1 Premining Area	58.1	91.63	No	91.63	23.34
2 Clearing & Grubbing	2	295.44	Yes	51.7	13.16
3 Active Mining	29	12115.97	Yes	2120.29	540.03
4 Regraded Area	29	9966.59	Yes	1744.15	444.23
5 Planted 0-90 days	29	4798.72	Yes	839.77	213.89
6 Planted 90 days-2yrs	203.3	4198.88	Yes	734.8	187.15
7 Permanent Revegetated	230.3	951.48	Yes	166.51	42.41

Total Soil Loss Delivered to PHC Point this Quarter: 1464.24 tons.

Quarter : 4 Year : 2017

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PHC point (tons)
1 Premining Area	29	20.49	No	20.49	5.22
2 Clearing & Grubbing	2	132.17	Yes	22.13	5.99
3 Active Mining	29	5420.3	Yes	948.55	241.59
4 Regraded Area	29	4458.73	Yes	780.27	198.73
5 Planted 0-90 days	29	2146.8	Yes	375.69	95.68
6 Planted 90 days-2yrs	203.3	1878.45	Yes	328.72	83.72
7 Permanent Revegetated	259.4	479.33	Yes	83.88	21.36

Total Soil Loss Delivered to PHC Point this Quarter: 652.22 tons.

Quarter : 1 Year : 2018

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PHC point (tons)
1 Premining Area	0	0	No	0	0
2 Clearing & Grubbing	2	139.94	Yes	24.49	6.23
3 Active Mining	29	5739.14	Yes	1004.35	255.8
4 Regraded Area	29	4721.01	Yes	826.17	210.42
5 Planted 0-90 days	29	2273.08	Yes	397.78	101.31
6 Planted 90 days-2yrs	203.3	1988.94	Yes	348.06	88.65
7 Permanent Revegetated	288.4	564.35	Yes	98.76	25.15

Total Soil Loss Delivered to PHC Point this Quarter: 687.99 tons.

Total Soil Loss Delivered to PHC Point during Previous Year: 3848.93 tons

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	0	0	No	0	0
2 Clearing & Grubbing	0	0	Yes	0	0
3 Active Mining	2	592.73	Yes	103.72	26.41
4 Regraded Area	29	7081.52	Yes	1239.25	315.64
5 Planted 0-90 days	29	3409.62	Yes	596.68	151.97
6 Planted 90 days-2yrs	203.3	2983.42	Yes	522.09	132.97
7 Permanent Revegetated	317.5	931.77	Yes	163.06	41.53

Total Soil Loss Delivered to PNC Point this Quarter: 668.54 tons.

Quarter : 3 Year : 2016

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	0	0	No	0	0
2 Clearing & Grubbing	0	0	Yes	0	0
3 Active Mining	0	0	Yes	0	0
4 Regraded Area	2	686.23	Yes	120.09	30.58
5 Planted 0-90 days	29	4798.72	Yes	839.77	213.89
6 Planted 90 days-2yrs	203.3	4198.89	Yes	734.8	187.15
7 Permanent Revegetated	346.5	1431.95	Yes	250.48	63.79

Total Soil Loss Delivered to PNC Point this Quarter: 495.43 tons.

Quarter : 4 Year : 2016

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	0	0	No	0	0
2 Clearing & Grubbing	0	0	Yes	0	0
3 Active Mining	0	0	Yes	0	0
4 Regraded Area	0	0	Yes	0	0
5 Planted 0-90 days	2	147.81	Yes	25.86	6.58
6 Planted 90 days-2yrs	203.3	1878.45	Yes	328.72	83.72
7 Permanent Revegetated	375.6	694.01	Yes	121.45	30.93

Total Soil Loss Delivered to PNC Point this Quarter: 121.24 tons.

Quarter : 1 Year : 2019

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	0	0	No	0	0
2 Clearing & Grubbing	0	0	Yes	0	0
3 Active Mining	0	0	Yes	0	0
4 Regraded Area	0	0	Yes	0	0
5 Planted 0-90 days	0	0	Yes	0	0
6 Planted 90 days-2yrs	176.3	1724.37	Yes	301.76	76.85
7 Permanent Revegetated	404.6	791.66	Yes	138.54	35.28

Total Soil Loss Delivered to PNC Point this Quarter: 112.14 tons.

Total Soil Loss Delivered to PNC Point during Previous Year: 1397.37 tons

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	0	0	No	0	0
2 Clearing & Grubbing	0	0	Yes	0	0
3 Active Mining	0	0	Yes	0	0
4 Regraded Area	0	0	Yes	0	0
5 Planted 0-90 days	0	0	Yes	0	0
6 Planted 90 days-2yrs	147.2	2160.36	Yes	378.06	96.29
7 Permanent Revegetated	433.7	1272.74	Yes	222.72	56.72

Total Soil Loss Delivered to PNC Point this Quarter: 153.02 tons.

Quarter : 3 Year : 2019

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	0	0	No	0	0
2 Clearing & Grubbing	0	0	Yes	0	0
3 Active Mining	0	0	Yes	0	0
4 Regraded Area	0	0	Yes	0	0
5 Planted 0-90 days	0	0	Yes	0	0
6 Planted 90 days-2yrs	118.2	2440.66	Yes	427.11	108.78
7 Permanent Revegetated	452.7	1911.23	Yes	334.46	85.18

Total Soil Loss Delivered to PNC Point this Quarter: 193.97 tons.

Quarter : 4 Year : 2019

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	0	0	No	0	0
2 Clearing & Grubbing	0	0	Yes	0	0
3 Active Mining	0	0	Yes	0	0
4 Regraded Area	0	0	Yes	0	0
5 Planted 0-90 days	0	0	Yes	0	0
6 Planted 90 days-2yrs	89.1	923.52	Yes	144.11	36.7
7 Permanent Revegetated	491.8	908.69	Yes	159.02	40.5

Total Soil Loss Delivered to PNC Point this Quarter: 77.2 tons.

Quarter : 1 Year : 2020

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	0	0	No	0	0
2 Clearing & Grubbing	0	0	Yes	0	0
3 Active Mining	0	0	Yes	0	0
4 Regraded Area	0	0	Yes	0	0
5 Planted 0-90 days	0	0	Yes	0	0
6 Planted 90 days-2yrs	50.1	587.93	Yes	102.87	26.2
7 Permanent Revegetated	520.8	1018.97	Yes	170.32	45.41

Total Soil Loss Delivered to PNC Point this Quarter: 71.61 tons.

Total Soil Loss Delivered to PNC Point during Previous Year: 495.82 tons

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	0	0	No	0	0
2 Clearing & Grubbing	0	0	Yes	0	0
3 Active Mining	0	0	Yes	0	0
4 Regraded Area	0	0	Yes	0	0
5 Planted 0-90 days	0	0	Yes	0	0
6 Planted 90 days-2yrs	31	455.54	Yes	79.72	20.3
7 Permanent Revegetated	549.9	1613.7	Yes	282.39	71.92

Total Soil Loss Delivered to PNC Point this Quarter: 92.23 tons.

Quarter : 3 Year : 2020

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	0	0	No	0	0
2 Clearing & Grubbing	0	0	Yes	0	0
3 Active Mining	0	0	Yes	0	0
4 Regraded Area	0	0	Yes	0	0
5 Planted 0-90 days	0	0	Yes	0	0
6 Planted 90 days-2yrs	2	41.3	Yes	7.22	1.84
7 Permanent Revegetated	578.9	2391.1	Yes	418.44	105.57

Total Soil Loss Delivered to PNC Point this Quarter: 108.41 tons.

Quarter : 4 Year : 2020

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	0	0	No	0	0
2 Clearing & Grubbing	0	0	Yes	0	0
3 Active Mining	0	0	Yes	0	0
4 Regraded Area	0	0	Yes	0	0
5 Planted 0-90 days	0	0	Yes	0	0
6 Planted 90 days-2yrs	0	0	Yes	0	0
7 Permanent Revegetated	581	1073.4	Yes	187.84	47.94

Total Soil Loss Delivered to PNC Point this Quarter: 47.84 tons.

Quarter : 1 Year : 2021

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PNC point (tons)
1 Premining Area	0	0	No	0	0
2 Clearing & Grubbing	0	0	Yes	0	0
3 Active Mining	0	0	Yes	0	0
4 Regraded Area	0	0	Yes	0	0
5 Planted 0-90 days	0	0	Yes	0	0
6 Planted 90 days-2yrs	0	0	Yes	0	0
7 Permanent Revegetated	581	1136.54	Yes	198.89	50.65

Total Soil Loss Delivered to PNC Point this Quarter: 50.65 tons.

Total Soil Loss Delivered to PNC Point during Previous Year: 299.15 tons

Quarter : 2 Year : 2021

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PHC point (tons)
1 Premining Area	0	0	No	0	0
2 Clearing & Grubbing	0	0	Yes	0	0
3 Active Mining	0	0	Yes	0	0
4 Regraded Area	0	0	Yes	0	0
5 Planted 0-90 days	0	0	Yes	0	0
6 Planted 90 days-2yrs	0	0	Yes	0	0
7 Permanent Revegetated	581	1704.81	Yes	298.34	75.98

Total Soil Loss Delivered to PHC Point this Quarter: 75.98 tons.

Quarter : 3 Year : 2021

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PHC point (tons)
1 Premining Area	0	0	No	0	0
2 Clearing & Grubbing	0	0	Yes	0	0
3 Active Mining	0	0	Yes	0	0
4 Regraded Area	0	0	Yes	0	0
5 Planted 0-90 days	0	0	Yes	0	0
6 Planted 90 days-2yrs	0	0	Yes	0	0
7 Permanent Revegetated	581	2399.36	Yes	419.68	106.94

Total Soil Loss Delivered to PHC Point this Quarter: 106.94 tons.

Quarter : 4 Year : 2021

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PHC point (tons)
1 Premining Area	0	0	No	0	0
2 Clearing & Grubbing	0	0	Yes	0	0
3 Active Mining	0	0	Yes	0	0
4 Regraded Area	0	0	Yes	0	0
5 Planted 0-90 days	0	0	Yes	0	0
6 Planted 90 days-2yrs	0	0	Yes	0	0
7 Permanent Revegetated	581	1072.4	Yes	187.84	47.84

Total Soil Loss Delivered to PHC Point this Quarter: 47.84 tons.

Quarter : 1 Year : 2022

Land Use Category	Area(Ac)	Gross Soil Loss (tons)	Routed Thru Basin ?	Sediment Passing Basin (tons)	Delivered to PHC point (tons)
1 Premining Area	0	0	No	0	0
2 Clearing & Grubbing	0	0	Yes	0	0
3 Active Mining	0	0	Yes	0	0
4 Regraded Area	0	0	Yes	0	0
5 Planted 0-90 days	0	0	Yes	0	0
6 Planted 90 days-2yrs	0	0	Yes	0	0
7 Permanent Revegetated	581	1136.54	Yes	198.69	50.65

Total Soil Loss Delivered to PHC Point this Quarter: 50.65 tons.

Total Soil Loss Delivered to PHC Point during Previous Year: 281.43 tons

***** END OF RUN *****

	FLOW	PH	FET	MNT	SPC	TSS	ACID
1:	0.261	6.82	0.04	0.04	1567	3	10
2:	0.393	7.30	0.23	0.06	1600	2	10
3:	0.214	7.21	0.32	0.005	1948	2	10
4:	0.887	6.54	0.43	0.18	917	6	6
5:	0.201	7.14	0.13	0.06	1895	3	12
6:	0.614	6.62	0.10	0.05	1816	2	8
7:	1.287	7.89	0.42	0.10	931	1	12
8:	1.594	8.22	0.16	0.19	1716	3	8
9:	0.641	8.00	0.17	0.28	1734	4	6
10:	0.740	7.19	0.17	0.18	894	1	6
11:	0.277	7.90	0.14	0.12	2120	6	NR
12:	0.732	6.22	0.27	0.21	1096	5	NR
13:	0.319	8.04	0.11	0.09	1207	1	NR
14:	0.841	7.74	0.13	0.12	984	1	NR
15:	0.651	7.61	0.26	0.12	901	3	NR
16:	0.063	7.66	0.14	0.07	1880	1	NR
17:	0.090	7.82	0.12	0.05	1833	2	NR
18:	1.053	7.51	0.16	0.18	982	1	NR

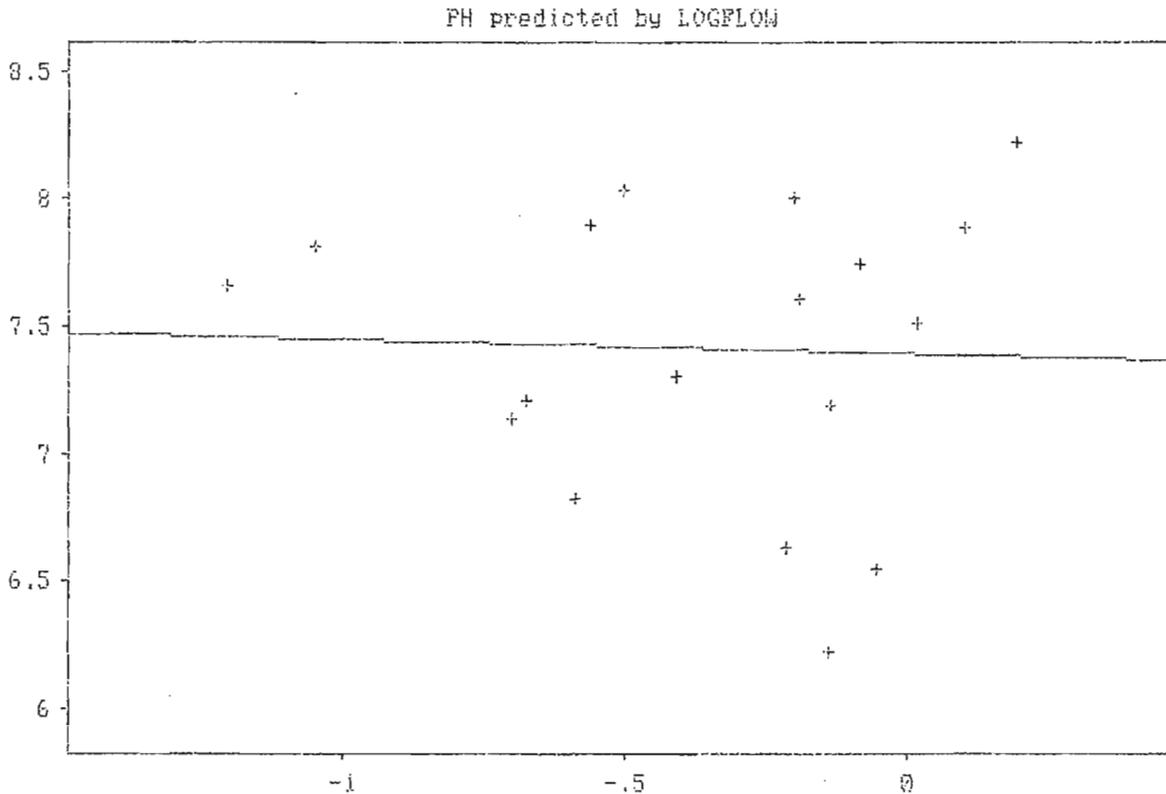
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Comment: WB MINING / FISHTRAP 2 / R-3 / WBF2SW-1

Page: 2

	ALK	SO4	DATE	SITE
1:	156	890	07-23-08	WBF2SW-1
2:	166	930	07-30-08	WBF2SW-1
3:	206	990	08-18-08	WBF2SW-1
4:	84	490	08-26-08	WBF2SW-1
5:	178	970	09-03-08	WBF2SW-1
6:	162	920	11-18-08	WBF2SW-1
7:	166	890	12-30-08	WBF2SW-1
8:	170	870	01-19-09	WBF2SW-1
9:	164	650	02-16-09	WBF2SW-1
10:	158	430	03-23-09	WBF2SW-1
11:	NR	NR	06-10-11	WBF2SW-1
12:	NR	NR	09-16-11	WBF2SW-1
13:	NR	NR	12-15-11	WBF2SW-1
14:	NR	NR	01-20-12	WBF2SW-1
15:	NR	NR	04-06-12	WBF2SW-1
16:	NR	NR	08-21-12	WBF2SW-1
17:	NR	NR	11-01-12	WBF2SW-1
18:	NR	NR	02-19-13	WBF2SW-1

Variable	Variable Name	Variable Description
1	FLOW	(CFSM)
2	PH	(S.U.)
3	FET	(mg/l)
4	MNT	(mg/l)
5	SPC	(umhos)
6	TSS	(mg/l)
7	ACID	(mg/l)
8	ALK	(mg/l)
9	SO4	(mg/l)
10	DATE	mm-dd-yy
11	SITE	(SITE SAMPLED)

	A+(B*X)	A*EXP(B*X)	A+B*LOG(X)	A*X^B
A REG COEFF	7.298979	7.288767	7.393315	7.364079
B REG COEFF	0.1886518	0.0231241	-.0241283	-.0045489
A STD ERROR	0.2446715	0.247605	0.1902599	0.1939972
B STD ERROR	0.3351265	0.0465298	0.160931	0.0222828
A t-STAT	29.83175	58.47186	38.85903	75.7909
B t-STAT	0.5629272	0.4969752	-.1499294	-.2041459
STD ERR EST	0.5847649	0.0811901	0.5901129	0.0817081
R-SQUARED	0.0194208	0.0152019	0.0014030	0.0025980
COVARIANCE	0.0337876	0.0041415	-.0190840	-.0035979
F-TEST	0.316887	0.2469843	0.0224788	0.0416755
CORR COEFF	0.1393585	0.1232958	-.0374561	-.0509701
DURBN-WATSN	2.123694	2.100743	1.855396	1.834119

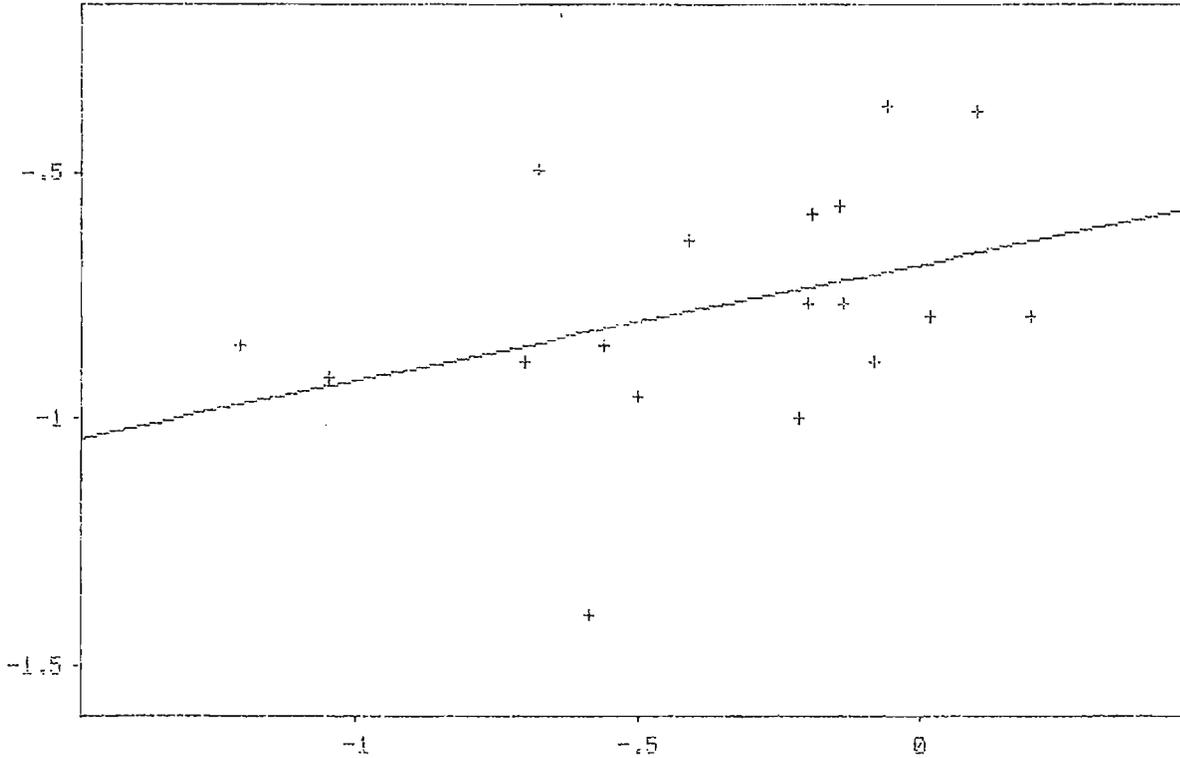


WB MINING - FISHTRAP NO 2 / R-3
 FOR WBF2SW-1
 PLOT OF LOG FLOW (X) VS pH (Y)

Linear —

	A+(B*X)	A*EXP(B*X)	A+B*LOG(X)	A*X^B
A REG COEFF	0.1358951	0.1235318	0.2313278	0.2039921
B REG COEFF	0.0970610	0.5152776	0.0457233	0.2364746
A STD ERROR	0.0428693	0.0279186	0.0330899	0.0357397
B STD ERROR	0.0587180	0.3095563	0.0279891	0.1481936
A t-STAT	3.169989	-9.253222	6.990879	-9.073422
B t-STAT	1.653003	1.664568	1.633613	1.595714
STD ERR EST	0.1024575	0.5401473	0.1026323	0.5434065
R-SQUARED	0.1458658	0.1476117	0.1429501	0.1372943
COVARIANCE	0.0173837	0.0922864	0.0361643	0.1870364
F-TEST	2.732419	2.770788	2.668691	2.546302
CORR COEFF	0.3819238	0.3842027	0.3780874	0.3705325
DURBN-WATSN	1.881597	1.829909	1.856724	1.791374

LOGFET predicted by LOGFLOW

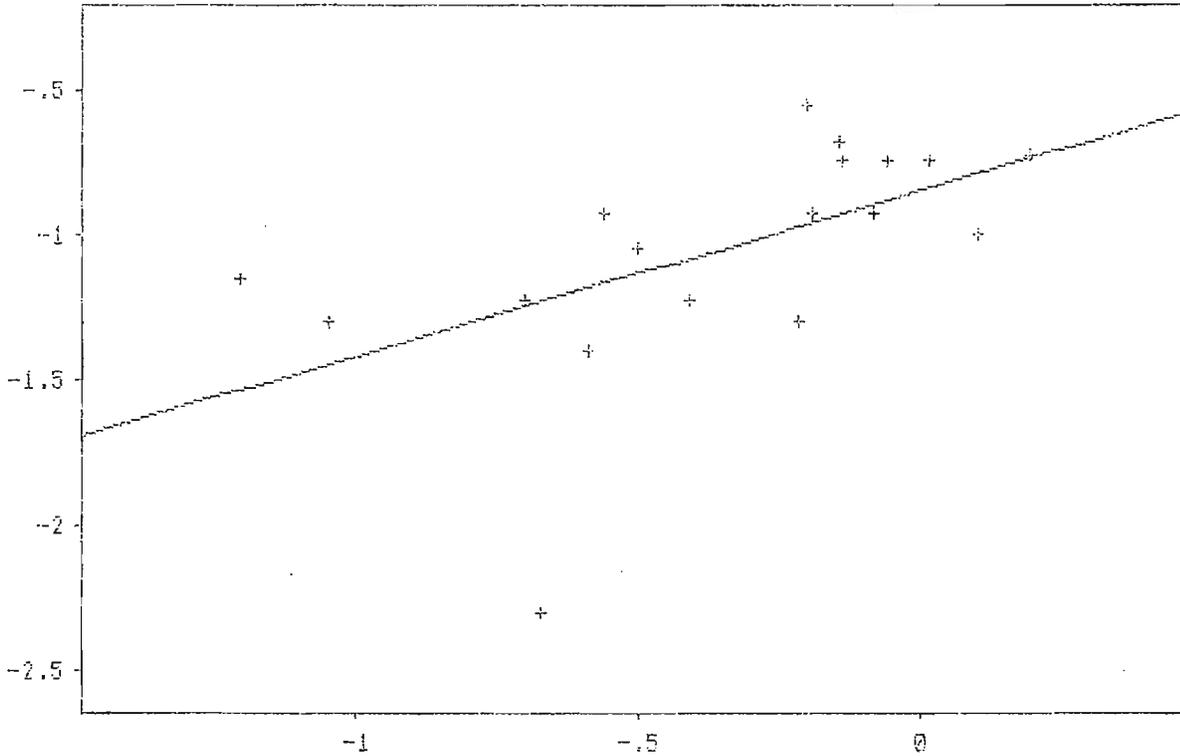


WB MINING - FISHTRAP NO 2 / R-3
 FOR WBF2SW-1
 PLOT OF LOG FLOW (X) VS LOG FeT (Y)

Linear —

	A+(B*X)	A*EXP(B*X)	A+B*LOG(X)	A*X^E
A REG COEFF	0.0564921	0.0433836	0.1573861	0.141129
B REG COEFF	0.1002157	1.194816	0.0501344	0.5688267
A STD ERROR	0.0254247	0.0143591	0.0190505	0.0359865
B STD ERROR	0.0348243	0.4533426	0.0161139	0.2156832
A t-STAT	2.221935	-9.479959	8.261499	-7.67904
B t-STAT	2.877756	2.63557	3.111255	2.637326
STD ERR EST	0.0607651	0.7910413	0.0590874	0.7908818
R-SQUARED	0.3410615	0.3027177	0.3769448	0.3029989
COVARIANCE	0.0179487	0.2139919	0.0396531	0.4499059
F-TEST	8.281478	6.94623	9.679907	6.955487
CORR COEFF	0.5840047	0.5501979	0.6139583	0.5504534
DURBN-WATSN	1.345273	1.481852	1.227849	1.165172

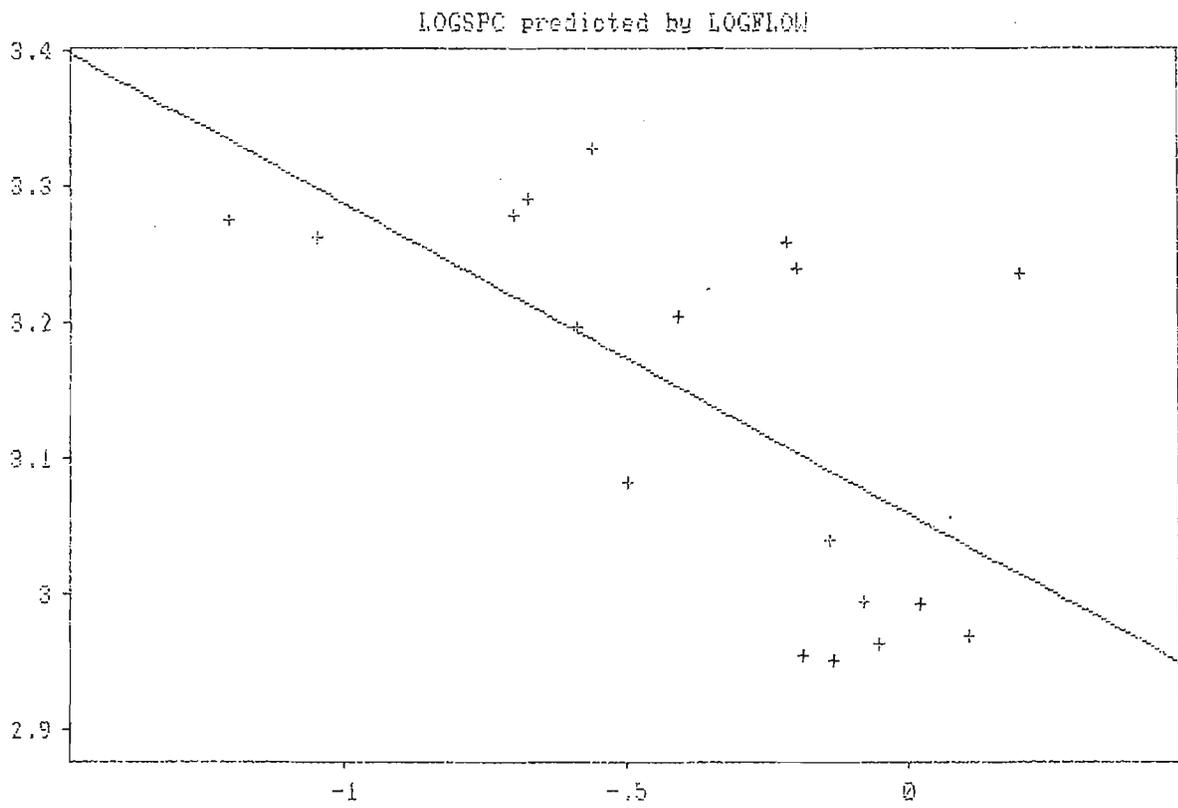
LOGMNT predicted by LOGFLOW



WB MINING - FISHTRAP NO 2 / R-3
 FOR WBF2SW-1
 PLOT OF LOG FLOW (X) VS LOG Mnt (Y)

Linear —

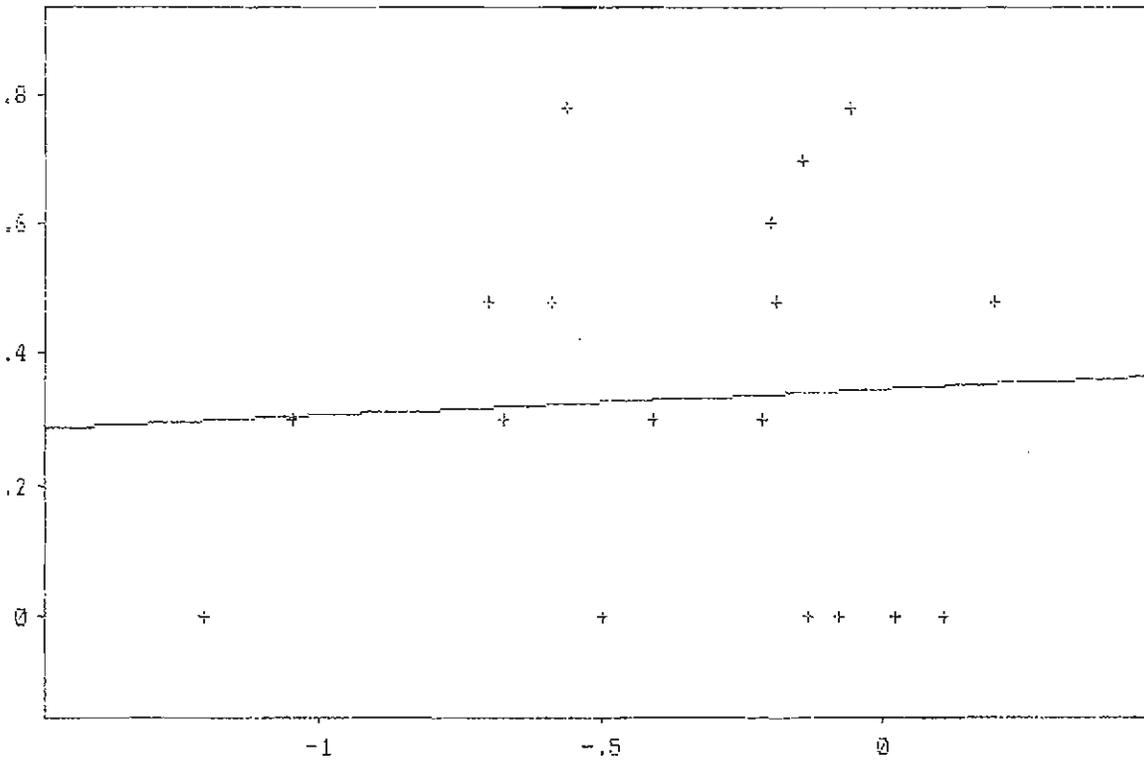
	A+(B*X)	A*EXP(B*X)	A+B*LOG(X)	A*X^B
A REG COEFF	1786.348	1765.823	1192.796	1146.666
B REG COEFF	-564.8618	-.4110485	-313.408	-.2278581
A STD ERROR	160.7203	208.3098	114.3185	96.41454
B STD ERROR	220.1386	0.16158	96.69613	0.0711211
A t-STAT	11.11464	63.37654	10.43397	83.78214
B t-STAT	-2.565938	-2.543931	-3.241164	-3.203806
STD ERR EST	384.1216	0.2819423	354.572	0.2607916
R-SQUARED	0.291535	0.2879897	0.3963436	0.3908098
COVARIANCE	-101.1669	-.0736189	-247.8859	-.1802213
F-TEST	6.584036	6.471586	10.50514	10.26437
CORR COEFF	-.5399398	-.5366467	-.6295582	-.6251478
DURBN-WATSN	2.124747	2.122807	2.024999	1.910251



WB MINING - FISHTRAP NO 2 / R-3
 FOR WBF2SW-1
 PLOT OF LOG FLOW (X) VS LOG SpC (Y) Linear —

	A+(B*X)	A*EXP(B*X)	A+B*LOG(X)	A*X^B
A REG COEFF	2.630417	2.258307	2.767103	2.216049
B REG COEFF	-.0320046	-.0844339	0.1933785	0.0397230
A STD ERROR	0.7267779	0.6322264	0.5571246	0.4780728
B STD ERROR	0.9954674	0.3834555	0.471243	0.1824766
A t-STAT	3.619286	2.909797	4.966757	3.688492
B t-STAT	-.0321503	-.2201922	0.4103584	0.2176882
STD ERR EST	1.736999	0.6690947	1.727986	0.6691176
R-SQUARED	0.0000646	0.0030211	0.0104150	0.0029530
COVARIANCE	-.0057320	-.0151221	0.1529502	0.0314184
F-TEST	0.0010336	0.0484846	0.168394	0.0473882
CORR COEFF	-.0080373	-.0549648	0.102054	0.0543416
DURBN-WATSN	1.949465	1.814618	1.933068	1.796162

LOGTSS predicted by LOGFLOW



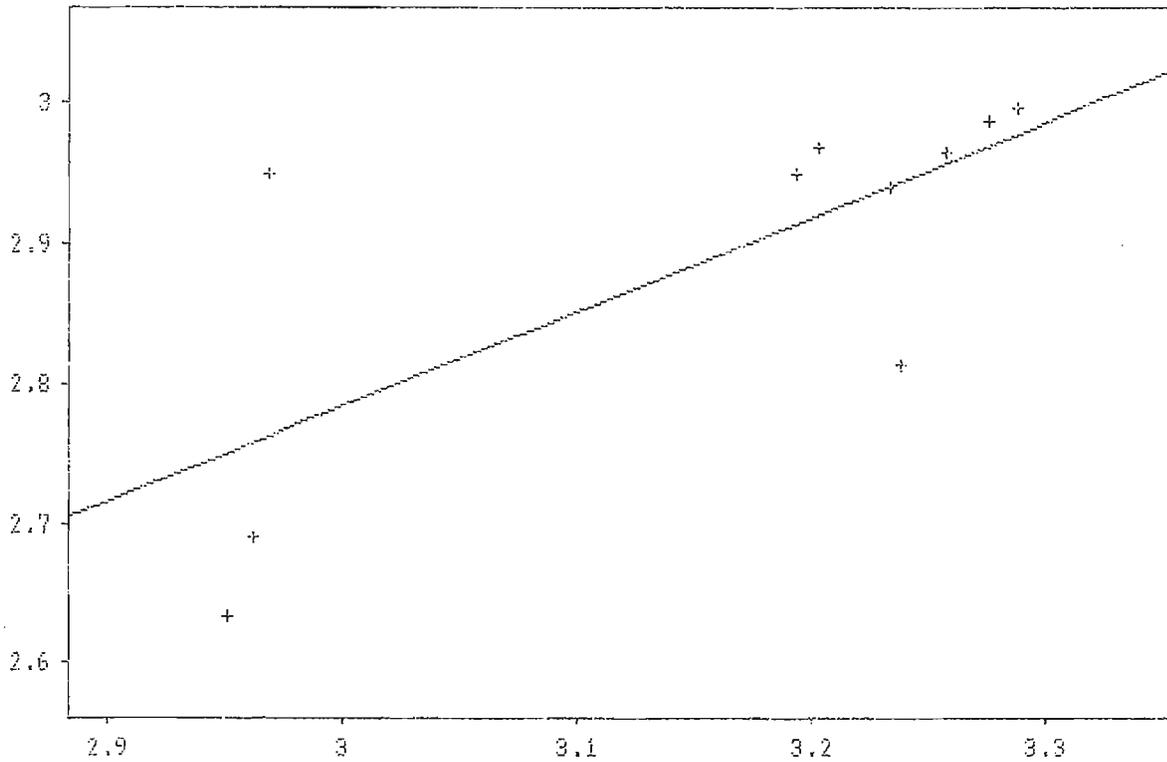
WB MINING - FISHTRAP NO 2 / R-3
 FOR WBF2SW-1
 PLOT OF LOG FLOW (X) VS LOG TSS (Y)

Linear —

Comment: WB MINING / FISHTRAP NO 2 / R-3 / FOR WBF2SW-1 / SpC VS SO4

	A+(B*X)	A*EXP(B*X)	A+B*LOG(X)	A*X^B
A REG COEFF	294.4576	362.824	-2456.51	5.863495
B REG COEFF	0.3386219	0.0005048	448.2299	0.6715274
A STD ERROR	188.6496	100.0999	1156.737	9.866216
B STD ERROR	0.1213755	0.0001775	158.9292	0.2311868
A t-STAT	1.56087	21.36321	-2.123654	1.051166
B t-STAT	2.789871	2.843997	2.820312	2.904696
STD ERR EST	153.6894	0.2247634	152.8645	0.2223649
R-SQUARED	0.4931377	0.5027448	0.4985634	0.5133009
COVARIANCE	60325.11	89.93422	46.07493	0.0690284
F-TEST	7.783378	8.088319	7.954161	8.437261
CORR COEFF	0.7022376	0.7090451	0.7060902	0.7164502
DURBN-WATSN	1.372346	1.400146	1.436008	1.468722

LOGS04 predicted by LOGSFC



WB MINING - FISHTRAP NO 2 / R-3
 FOR WBF2SW-1
 PLOT OF LOG SpC (X) VS LOG SO4 (Y)

Linear —

WATER QUALITY & QUANTITY PROJECTIONS

Company Name : WB MINING, LLC.
 Mine Name : FISHTRAP NO. 2 / REVISION R-3
 Site ID Number : FISHTRAP BRANCH AT WBF2SW-1

Watershed Drainage Area (sq.mi.) : 1.89
 Permit Area (sq.mi.) : 0.930
 Previously Disturbed Area (sq.mi.): 0.383
 Percent Previously Disturbed : 20.25%
 Percent to be Permitted : 49.21%
 Remaining Watershed Area : 50.79%

=====
 CHANGES IN POST MINE FLOW RATES WITHIN PERMIT AREA...

7Q2 : 1.457 AVG : 1.200 2YR : 0.732

=====
 N.P.D.E.S. EFFLUENT LIMITATIONS

pH (s.u.) -- 6.00
 FeT (mg/l) -- 3.00
 MnT (mg/l) -- 2.00
 SpC (umhos) --- 2000.00
 TSS (mg/l) -- 35.00

=====
 REGRESSION ANALYSIS VALUES.....

Parameter	A	B
pH	7.364	-0.0045
Fe	0.204	0.236
Mn	0.1411	0.569
SpC	1146	-0.228
TSS	2.216	0.040
SO4	5.863	0.6715

=====
 WATERSHED DRAINAGE AREA FLOWS IN CFSM.....

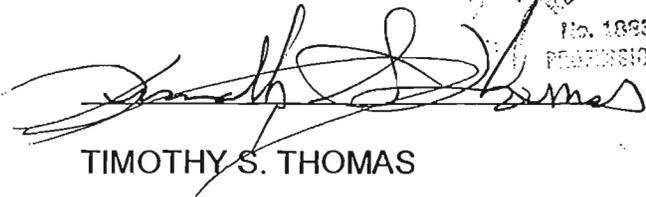
	Baseline	During Mining	Post Mining
7Q2 Event	0.142	0.0721	0.1739
AVG Event	1.500	1.131	1.648
2YR Event	122.24	107.20	106.09

=====
 QUALITY PARAMTERS/PROJECTIONS.....

	pH	FeT	MnT	SpC	TSS	SO4
7Q2 EVENT-----						
Baseline	7.43	0.129	0.046	1788	2.0	895.7
During Mining	6.74	1.532	1.000	2044	18.2	979.8
Post Mine	7.36	0.262	0.137	1813	3.6	903.8
AVG EVENT-----						
Baseline	7.35	0.224	0.178	1045	2.3	624.3
During Mining	6.69	1.583	1.061	1550	18.4	813.7
Post Mine	7.29	0.354	0.262	1093	3.8	643.4
2YR EVENT-----						
Baseline	7.21	0.634	2.173	383	2.7	318.3
During Mining	6.61	1.788	2.009	1135	18.6	679.2
Post Mine	7.15	0.744	2.158	459	4.2	359.5

CERTIFICATION STATEMENT:

All information including surface water modeling, groundwater interpretations, and estimates of surface and groundwater impact written for the preceding Addendum to Parts II-E thru II-H for the WB Mining, LLC. - Fishtrap No. 2 Mine Revision R-3 Area was prepared by, or under the direction of, a professional engineer and I hereby certify that it is true and correct to the best of my knowledge or belief.



TIMOTHY S. THOMAS

Date: 04-11-13

PROFESSIONAL ENGINEER

REGISTRATION NO. 18830

WB Mining, LLC.
Fishtrap Mine No. 2
P-3930 / Revision R-3

HYDROLOGIC
RECLAMATION PLAN

submitted by:
Perc Engineering Co., Inc.
P.O. Box 1712
Jasper, AL. 35502-1712

Hydrologic Reclamation Plan (880-X-8H-.06(1)(g)):

I. Steps to Minimize Hydrologic Balance Disturbance:

Surface mining and reclamation activities conducted on the WB Mining, LLC. - Fishtrap Mine No. 2 / Revision R-3 Area will be conducted to minimize disturbance to the hydrologic balance. Several ways in which this will be accomplished are, but not limited to the following:

- a. Monitoring and Reporting of sediment basins 009P, 009AP, 010P, 011P, and 012P at this mine site (where all runoff from the mine area will drain), surface water monitoring sites WBF2SW-1 and WBF2SW-3, and Groundwater Monitoring Sites WBF2MW-1 and WBF2MW-3 as required by the Regulatory Authorities will be performed in accordance with the approved Hydrologic Monitoring Plan.
- b. Physical and chemical treatment of the outfalls at this mine site as necessary to comply with State and Federal Water Quality Laws.
- c. Upon completion of mining, and regrading, surface media will be sampled systematically and sent to the Auburn University Testing Laboratory, or another qualified laboratory, for analyses to determine type and amount of soil amendments necessary to maintain vegetative growth as reported in Part IV-C-1 of the permit application. This sampling system should be adequate (see below).
 1. The chemical analyses will consist of the followings parameters: pH, % Sulfur, Phosphorus, Potassium, Magnesium, Calcium, Maximum Potential Acidity, Neutralizing Potential, NO₃-N, and Recommendations for the amounts of Limestone, Nitrogen, P205, and K₂O to be added to the soil.
 2. The physical analyses will consist of the following parameters: Sieve Analysis, % Sand, % Silt, % Clay, Textural Classification, and Available Water Capacity.
- d. Husbandry practices will include, seeding spot areas within the Fishtrap No. 2 Mine to increase cover and the addition of proper nutrients. Suitable mulch shall be used on all regraded and topsoiled areas to control erosion and increase the moisture retention capacity of the soil. A maximum of 3 tons per acre of hay will be used as mulch.
- e. With respect to the Hydrologic Balance, because mining at this site is not expected to significantly affect the regional aquifer in the area, there should be no significant adverse effect on the Hydrologic Balance from mining within the permit area.

II. Material Damage Outside the Permit Area:

All surface mining and reclamation activities within the post R-3 Fishtrap Mine No. 2 will be conducted to minimize and prevent material damage to the hydrologic balance. Several ways in which this will be accomplished are, but not limited to the following:

1. Observing the 300 ft. setbacks from occupied dwellings, unless acceptable waivers are submitted and approved by ASMC.
2. Mining within the permit boundary.
3. Observing and complying with all State and Federal Water Quality Limits.
4. If encountered, mine openings within the permit area (other than blast holes) will be eliminated in the following methods:
 - A) Exploration Holes - Exploration holes will be backfilled with the drill cuttings and capped with two (2) feet of clay.
 - B) Monitoring Wells - Groundwater monitoring wells will be sealed at the time of abandonment with a concrete cap (1.5'x1.5'x.5').
 - C) Mine Openings - None are known to be present within the permit area.
5. Timely regrading for drainage control.
6. On site sediment control to prevent sediment from entering ponds.
7. Timely revegetation of all disturbed areas.

III. Applicable State and Federal Water Quality Laws:

To meet the applicable State and Federal effluent limitation standards as set forth by the Environmental Protection Agency and the Alabama Department of Environmental Management, the applicant shall minimize potential water quality problems by properly handling and disposing of any acid or toxic forming materials and treating contaminated drainage. To assure water quality standards, periodic performance monitoring will be conducted as approved in the Hydrologic Monitoring

Plan. Sediment basins will be utilized as collection sites for surface water treatment when runoff from the mine site requires it. In the event quality problems should arise, the following procedures will be used:

- 1) Lime or caustic soda to raise a low pH.
- 2) Potassium permanganate to decrease manganese levels.
- 3) Alum to decrease total suspended solid concentrations.

In the event alternative methods or chemicals are needed, the Regulatory Authority will be notified prior to use.

IV. Rights of Present Water Users:

As stated above, a well inventory conducted for the Revision R-3 area by PERC Engineering Co., Inc. on 03-29-2013 reveals that there still only 3 residences within a ½ mile radius of the post R-3 Fishtrap No. 2 Mine and all three still utilize local groundwater from the same well as their only domestic source. This well was addressed in the original hydrogeologic report and the following was noted: "As shown on the attached Mine Site Location Map, residences FT2-1, 2, and 3 are located approximately ½ mile east of the proposed mine site. The residences all utilize the same 110 ft. deep well as their only domestic source. As stated above, for the affected groundwater to migrate off-site through the sandstone unit seen in Groundwater Monitoring Site WBF2MW-1 (the lithologic site which is closest to the well), the top of the post mine spoil aquifer must be at least 119.5 ft. thick. Also as

stated above, post mine groundwater levels in the post mine spoil aquifer will be much lower in elevation due to the fracturing of low permeability shale strata, and the creation of large voids in this interval during mining. Even if post mining groundwater levels reach this high, the amount of affected groundwater which migrates off-site should be small based on the fact that 1) post mine groundwater levels fluctuate greatly based on both higher base flow generation (which drains the spoil aquifer) and rainfall amounts and frequency (and all areas of Alabama go through drought conditions during the summer and early fall), and 2) the amount of groundwater migrating into the sandstone interval discussed above would depend upon the top of the post mine spoil aquifer being above the 119.5 ft. thick depth for a significant amount of time and the rate of migration of affected groundwater into off-site strata would be limited by the hydraulic conductivity of the sandstone in the undisturbed strata. Also, the concentrations of contaminants (H^+ , FeT, MnT, and SO_4) would be much diluted by diffusion by the time affected groundwater had traveled $\frac{1}{2}$ mile. Therefore it is not anticipated that the mining of this proposed permit would significantly affect either the quality or quantity of this well." A comparison from the two samples taken from the same well, one collected on 03-28-2009 during the inventory for the original permit area (called FT2-1), and one collected on 03-29-2013 during the inventory for the Revision R-3 area (called FT2R3-1) reveals that there has been no impact to this groundwater resource during the interim. **See attached results of FT2-1 from the original hydrogeologic report.** The sample collected on 03-29-2013 has a higher pH, lower mineralization, similar conductivities, and a lower sulfate concentration than

the sample collected on 03-28-2009. This analysis confirms there has been no additional impact to this aquifer from local mining. The only difference from the original permit to the post R-3 permit area is that the post R-3 permit area will be located approximately 1,300 ft. from the well in question instead of the original one half mile. Based on the fact that the stated dip of the local strata is toward the southeast, that the proposed addition is a minimum of 1,300 feet towards the west, and that, as stated above, the post mine spoil aquifer would have to be more than 119.5 ft. thick for it to intersect the bottom of the FT2R3-1 well, it is not very likely this local groundwater source will be significantly affected by the mining of the Revision R-3 Area.

V.A. Acid and Toxic Drainage:

It should be noted that the area added by this revision is contiguous to the existing permit and lies between the Fishtrap No. 2 Mine and the C&H Mining - Lindbergh No. 2 Mine (ASMC permit number P-3765) as shown on the Mine Site Location Map. Also shown on this map are several lithologic, geochemical analysis, and groundwater monitoring sites drilled for the Fishtrap (ASMC permit number P-3813), Fishtrap No. 2, and Lindbergh No. 2 mines . Therefore, these sites should adequately describe the structure, elevation, orientation, lithology, content, and geochemistry of the area added by Revision R-3. Please see the respective Hydrogeologic Report for this information. Coal stockpiles will be located in such a manner whereas excess drainage may be diverted from Coal stockpile areas. When the Coal stockpile becomes no longer necessary it will be reclaimed by removing

the Coal which makes up the pad by truck & covering the pad area with four feet of the best available non-toxic, non-combustible material, or chemically treating the pad & covering the pad with 1 ft. of material, and revegetating in accordance with the approved Reclamation Plan (Part IV-C-5). The pit bottom will have a much lower permeability than the spoil after mining, which should contain any acid or toxic drainage until the highwall is reclaimed and the drainage is allowed to filter into the buffering material and be neutralized. Any material such as oil, grease, rags, etc., that may present a fire hazard will be properly disposed of in an approved landfill. Any non-Coal waste will be disposed of at approved off-site landfills which meet all applicable local, state and federal requirements.

V.B. Contribution of TSS to Streamflow:

Total Suspended Solids within the permit area will be controlled by utilizing the sediment basins to control runoff. These sediment basins will be designed to retain all settleable solids, skim and retain all floating solids and provide adequate detention volume and time to minimize the contribution of total suspended solids into the receiving stream. In the event that a problem arises with the TSS in the discharge of the sediment basin, Alum will be introduced into the basins to decrease total suspended solid concentrations. An alternative to Alum could be the construction of a floating silt fence to cause the solid to floc and settle to the bottom.

V.C. Water Treatment Facilities:

The sediment basins will be the primary treatment facility to which chemical

treatment may be introduced as needed to maintain effluent limits set forth by the Regulatory Authority. Sediment basins will be constructed downstream of the permit area to control drainage and collect sediment from the disturbed area during surface mining and during the reclamation phase. In the event quality problems should arise, the following procedures will be used :

- 1) Lime or caustic soda to raise a low pH.
- 2) Potassium permanganate to decrease manganese levels.
- 3) Alum to decrease total suspended solid concentrations.

In the event alternative methods or chemicals are needed, the Regulatory Authority will be notified prior to use.

V.D. Drainage Control:

Sediment basins will be constructed during mining operations to control drainage and collect sediment from the disturbed area during the construction phase and during the reclamation and restabilization phase. All surface and groundwater runoff will be controlled through the basin whose design is shown in Part III-B of the application. The basin will be constructed, prior to any disturbance in its drainage area, under the supervision of a qualified Registered Professional Engineer or be a qualified person under his direct supervision. Upon completion of construction the basin will then be certified to the Regulatory Authority as having been constructed by bringing desirable material in and compacting it in lifts until the construction

specifications are met. Drainage structures will be installed as per design plans with any necessary erosion control and/or stabilization procedures such as riprap, concrete, drop structures, energy dissipaters, etc. being implemented as deemed necessary by the project engineer. Upon completion of construction the entire disturbed area will be revegetated in accordance with the approved Reclamation Plan (IV-C-5). Silt fences, hay filter dams, dust control on roads, lush vegetation, diversions ditches and other prudent practices will be utilized in controlling runoff.

V.E. Restore Approximate Recharge Capacity:

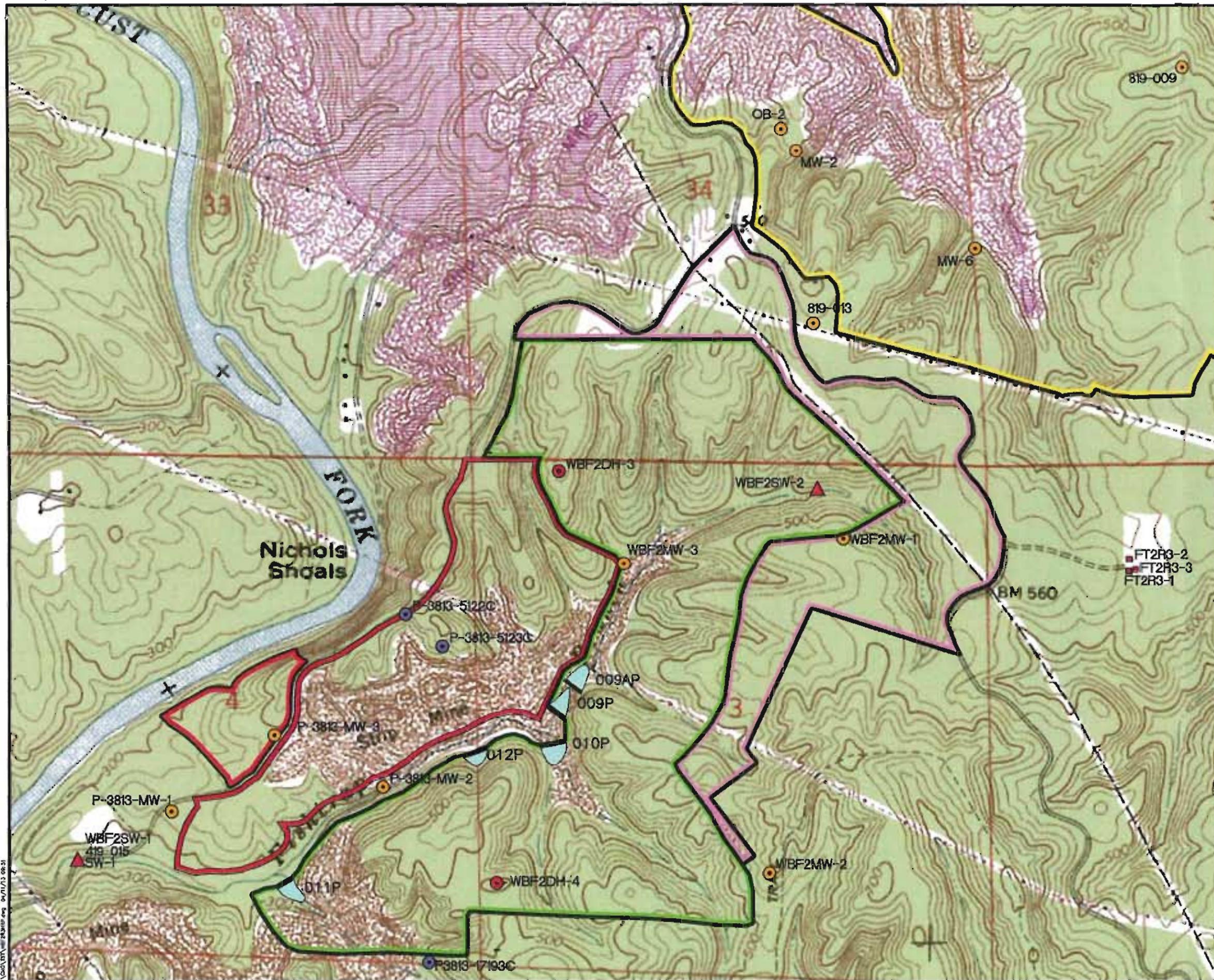
Due to the unconsolidated nature of the post mine strata and the voids present after mining, gravitational forces (as opposed to capillary forces) will play a larger role in influencing infiltrated groundwater movement, therefore groundwater levels in the post mine aquifer will be lower on average than an unaffected aquifer of identical thickness and extent, and lateral groundwater movement in the post mine aquifer will be much greater than prior to mining therefore, as stated previously, baseflow to surrounding streams will increase.

V.F. Rights of Present Water Users:

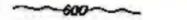
In the event that it is shown that mining by WB Mining, LLC. has diminished the quality or quantity of surrounding well(s), one of the following methods of replacing the resident's domestic supply will be implemented: 1) an alternative source of groundwater for either shallow groundwater wells or wells with inadequate casing

would involve drilling a new well in which the casing would penetrate an aquitard, such as shale, below the lowest target coal seam, and the well would also terminate below the aquitard in water-producing strata, such as sandstone, or 2) connect the residence to an existing municipal water supply, or 3) other methods which replace the groundwater users supply and is agreeable to both the user and the operator will be considered an alternative.

V.G. Potential Adverse Consequences from PHC: None anticipated.



MAP LEGEND

-  Original Permit Boundary
-  Fishtrap Mine P-3813
-  Revision R-3 Area
-  P-3765 Boundary
-  Surface Contour
-  Sediment Basin
-  Previously Surface Mined
-  Drill Hole (Lithology only)
-  Geochemical Analysis Site
-  Groundwater Monitoring Site
-  Surface Water Monitoring Site
-  Inventoried Residence

NOTE:
BASE MAP TAKEN FROM THE
SYLVAN SPRINGS U.S.G.S.
QUADRANGLE.



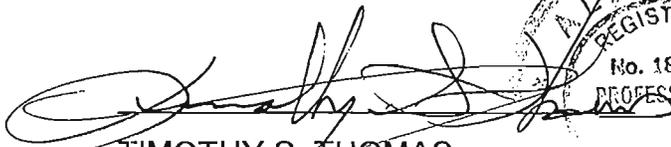
**WB Mining, LLC.
Fishtrap Mine No. 2
P-3930 / Revision R-3
Hydrologic Reclamation Plan Map**

DRAWN BY: C.M.O.	DATE: 3-25-13
DWG. NAME: WBF2R3HRP	
APPROVED BY: T.S.T.	SCALE: 1"=1000'

1: C:\GIS\Map\24389.dwg 04/17/13 08:31

CERTIFICATION STATEMENT:

The preceding Hydrologic Reclamation Plan for WB Mining, LLC. at their Fishtrap No. 2 Mine under Revision R-3 was prepared by, or under the direction of, a professional engineer and I certify that it is true and correct to the best of my knowledge and belief.


TIMOTHY S. THOMAS
PROFESSIONAL ENGINEER
REGISTRATION NO. 18830

 Date: 04-11-13