

Applicant: <u>Best Coal, Inc.</u>
Mine Name: <u>Narley Mine</u>
Permit Number: P- <u>3850, Revision R-8</u>

Part III - Operation Plan

A. General Operation Information

1. Describe the type and method of coal mining procedures and major equipment to be used. (780.11)

See Attachment III-A-1.

Major equipment to be used includes but may not be limited to:

- Backhoes
- Off Road Haulers
- Loaders
- Drills
- Service Trucks
- Dozers
- Track Backhoes
- Bulk Anfo Trucks

2. Describe the sequence and timing of increments to be mined (as shown on permit map) over the total life of the permit. (780.11)

The timing increments are as follows:

Inc. No.	Acres	From	Estimate Life
6	33	Issuance of Permit	End of Permit
1	78	Reclamation Phase	
2	62	Reclamation Phase	
4	264	Active Mining	12 Months
3	41	Active Mining	12 Months
5	93	End of Increment #4	12 Months

The sequence of mining operations will be generally as follows:

- 1) Construction of Sediment Control Structures
- 2) Clearing and Grubbing
- 3) Topsoil Removal (if required)
- 4) Overburden Drilling and Blasting
- 5) Overburden Removal
- 6) Coal Recovery
- 7) Re-Grading
- 8) Revegetation

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

The area method of surface mining will be used. Preparation will consist of (a) timber removal (b) topsoil removal (if required) (c) drilling and blasting of overburden (d) overburden removal (e) coal removal (f) regrading and revegetation. Once the site has been regraded and topsoiled (if required) soil samples will be analyzed (where required) and proper nutrients will be added before revegetation. Any problem that may arise will be handled by proper consulting personnel utilizing various support equipment and support personnel. The New Castle, Mary Lee and Blue Creek Coal Seams will be mined as mining progresses along the length of each cut. That is, the New Castle seam will be mined the complete length of a given cut, then the Mary Lee seam, and finally the Blue Creek seam prior to operations advancing to the subsequent cut. Mining will continue in this manner until the limits of each increment are reached.

Increment No. 1 and No. 2 have been mined as previously approved. Increment No. 5 will be mined as previously approved.

Upon issuance of Revision R-8, the mining of Increment No. 4 will continue at the existing highwall as shown on the attached Operations Map. Mining within Increment 4 will be conducted simultaneously with the eastern and southern portions of the increment. Pits along the eastern portion will generally align north to south with advancement to the east. Spoil material from the initial cuts will be placed in previous open pits and spoil material from the next cuts will be placed within previous cuts and subsequent open pits. Pits along the southern portion will be re-aligned to be orientated Northeast to Southwest as a box cut along side Basin 005E will be excavated up to the Basin 026 area and skirt around to the Southwest side of the Basin and then progressing Northwest ending prior to intersecting the diversion ditch at the Permit Boundary. Spoil material from the initial cuts will be placed in the spoil area identified by cross sections M-M', N-N' and O-O' in Increment No. 3 on the Permit Map. The next four cuts will be aligned in the same direction excavating North of the drainage course and South of the drainage course entering the upstream end of Basin 026 as shown on the Operations Map in an effort to create a straight

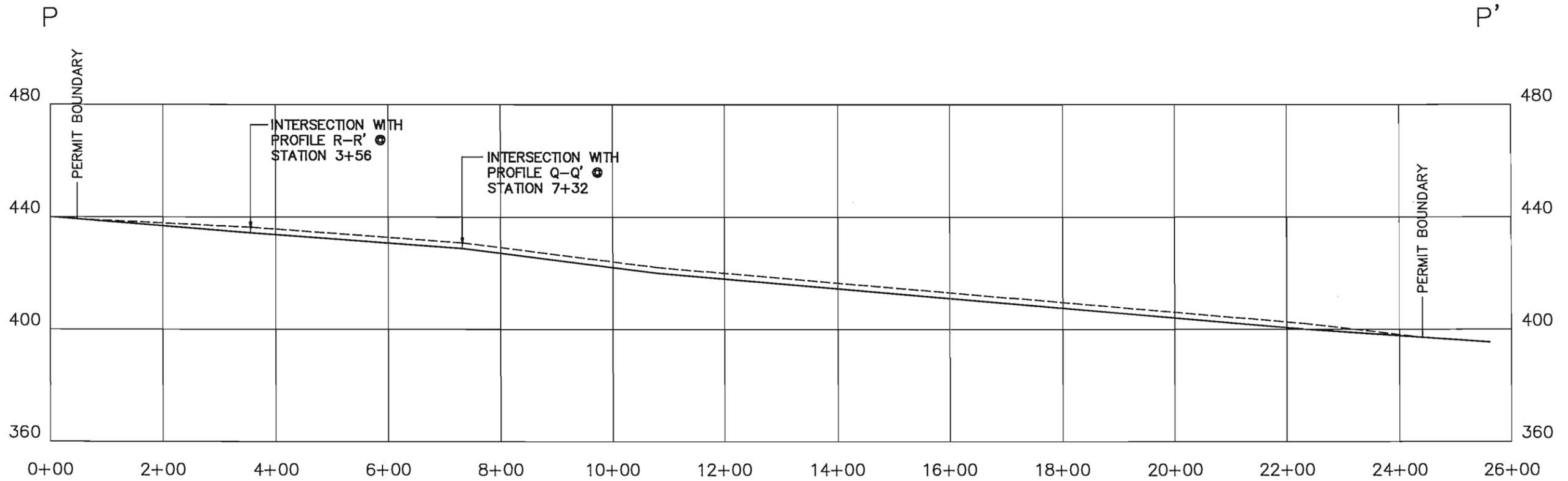
Applicant: Best Coal, Inc.  
Mine Name: Narley Mine  
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alignment the entire length of the cut. After five cuts have been excavated the mining cut will be continuous, straight and extend from the current highwall to the Permit Boundary along the West line of the West 1/2 of the SE 1/4 of Section 24 and progress in a South East direction until mining is completed in Increment No. 4. Spoil material from these first five cuts will consist of approximately 2,250,000 cubic yards and will be placed in the area identified on the Permit Map as Increment No. 3 which will accommodate approximately 3,000,000 cubic yards as shown on the Reclamation Cross Sections M-M', N-N' and O-O'. This spoil area will also accommodate the spoil material requiring disposal, due to swell, to re-establish the drainage path locations identified by Profiles P-P', Q-Q' and R-R' shown on the Operations Map. The drainage path will be graded in a manner as shown on the Profiles to ensure drainage is not blocked from passing thru the mining spoil area unhindered as configured prior to disturbance by mining. Once the five cuts skirting around Basin 026 are completed and a straight, continuous cut is established Northeast to Southwest, as shown on the Operations Map, the spoil material will be placed in previous open pits and spoil material from the next cuts will be placed within previous cuts and subsequent open pits. Mining will continue in this manner within each portion of the increment until the permit boundaries on the West, East and South side of the permit are reached.

See Profile L-L' and Cross-sections J-J' and K-K' as approved in Revision R-4, shown on the operations map, for the grading of the drainage course to Basin 005E from the southeast portion of the permit boundary contained in the NW 1/4 of SW 1/4 of Section 19, Township 15 South, Range 3 West.

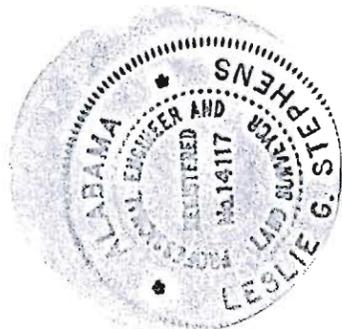
See Attachment III-A-1, Operation Map, for the alignment of mine cuts and direction of mining.

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1"=200' HORZ.  
1"=40' VERT.

————— EXISTING GRADE  
 - - - - - PROPOSED FINISH GRADE



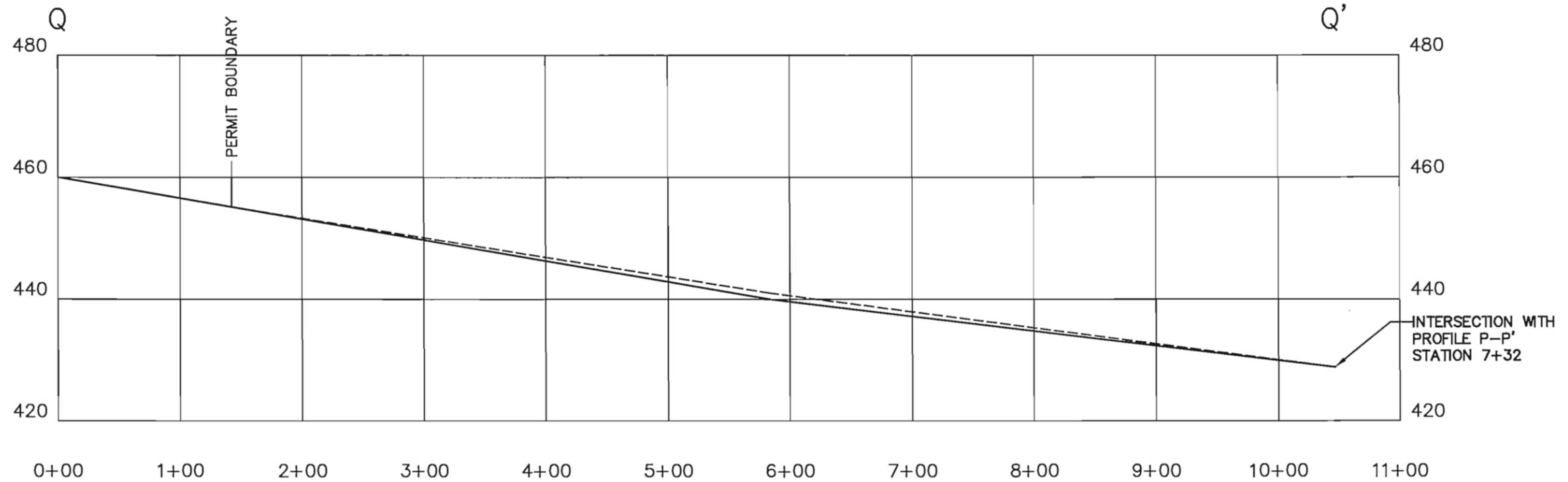
I, Leslie G. Stephens, a Registered Professional Engineer and Land Surveyor, hereby certify the foregoing to be a true and correct drawing to the best of my knowledge, information, and belief.

*Leslie G. Stephens* 05/15/2012  
 Leslie G. Stephens, P.L.S. & P.E. Date  
 AL Reg. No. 14117-E



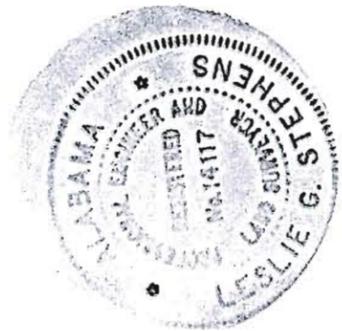
**BEST COAL, INC.**  
**NARLEY MINE P-3850/REVISION R-8**  
**PROFILE P-P'**

DRAWN BY: GOR	DATE: 5-15-2012
DWG. NAME: BCNMPROPQR-R8	
APPROVED BY: LGS	SCALE: AS NOTED



1"=100' HORZ.  
1"=20' VERT.

— EXISTING GRADE  
- - - PROPOSED FINISH GRADE



I, Leslie G. Stephens, a Registered Professional Engineer and Land Surveyor, hereby certify the foregoing to be a true and correct drawing to the best of my knowledge, information, and belief.

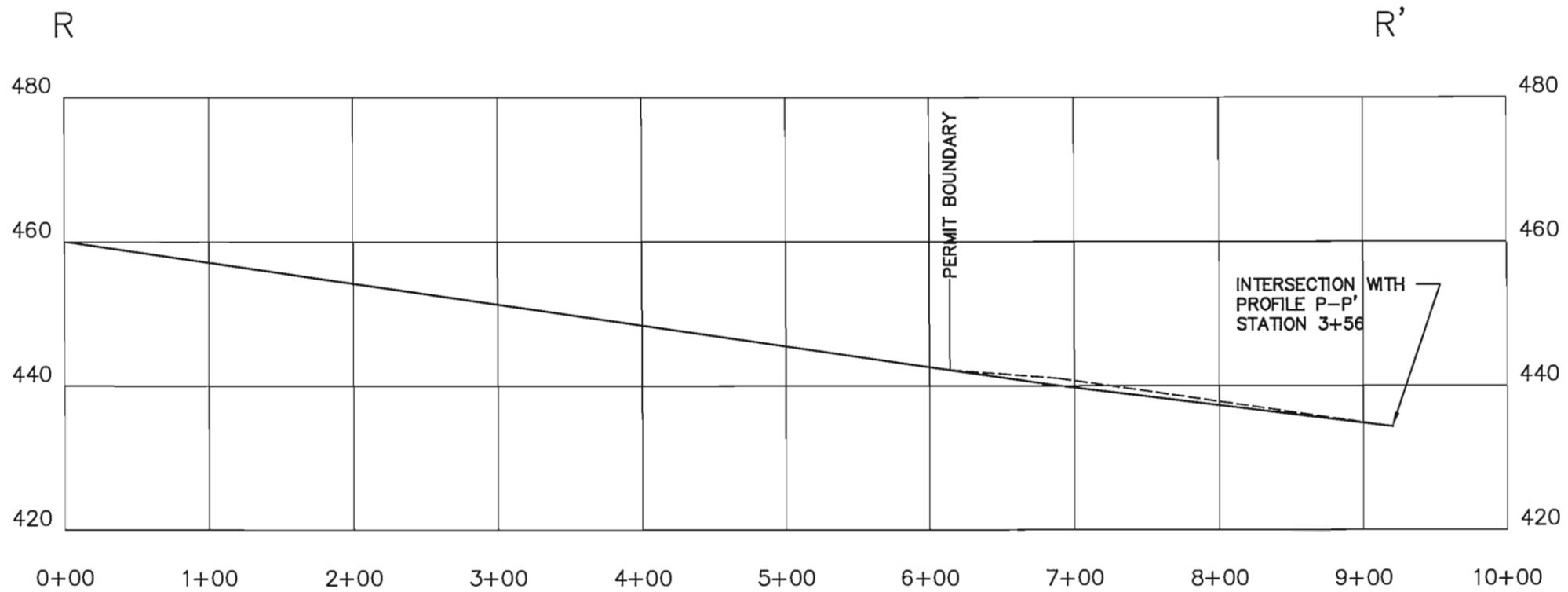
*Leslie G. Stephens* 05/15/2012  
 Leslie G. Stephens, P.L.S. & P.E. Date  
 AL Reg. No. 14117-E



**BEST COAL, INC.**  
**NARLEY MINE P-3850/REVISION R-8**  
**PROFILE Q-Q'**

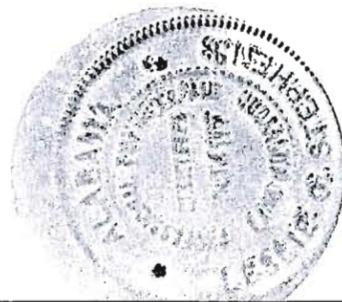
DRAWN BY: GOR	DATE: 5-15-2012
DWG. NAME: BCNMPROPQR-R8	
APPROVED BY: LGS	SCALE: AS NOTED

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1"=100' HORZ.  
1"=20' VERT.

—— EXISTING GRADE  
- - - - PROPOSED FINISH GRADE



I, Leslie G. Stephens, a Registered Professional Engineer and Land Surveyor, hereby certify the foregoing to be a true and correct drawing to the best of my knowledge, information, and belief.

*Leslie G. Stephens* 05/15/2012  
 Leslie G. Stephens, P.L.S. & P.E. Date  
 AL Reg. No. 14117-E



**BEST COAL, INC.**  
**NARLEY MINE P-3850/REVISION R-8**  
**PROFILE R-R'**

DRAWN BY: GOR	DATE: 5-15-2012
DWG. NAME: BCNMPROPQR-R8	
APPROVED BY: LGS	SCALE: AS NOTED

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Applicant: Best Coal, Inc.  
Mine Name: Narley Mine  
Permit Number: P- 3850, Revision R-8

2. Ponds, impoundments, banks, dams and embankments.  
(780.25)

- (a) Submit a general plan which complies with Section 780.25(a)(1) for each proposed sedimentation pond, water impoundment, and coal processing waste bank, dam or embankment to be located within the proposed permit area.  
See attachment III-B.-2.A
- (b) Submit detailed design plans which comply with Sections 780.25(a)(2 and 3) and 816.46 for each sedimentation pond to be constructed on the increment you currently propose to mine. If the sediment pond is to remain as a permanent water impoundment, design plans shall also comply with Section 816.49.  
See attachment III-B.-2.A
- (c) Submit detailed design plans which comply with Sections 780.25(a)(2 and 3) and 816.49 for each temporary or permanent water impoundment to be constructed on the increment you currently propose to mine.  
None proposed.
- (d) Submit detailed design plans which comply with Sections 780.25(a)(2 and 3) and 816.81-816.85 for each coal processing waste bank to be constructed on the increment you currently propose to mine.  
None proposed.
- (e) Submit detailed design plans which comply with Sections 780.25(a)(2 and 3) and 816.91-816.93 for each coal processing waste dam and embankment to be constructed on the increment which you currently propose to mine.  
None proposed.

3. Diversions. (780.29, 816.43, 816.44)

Are diversions of overland flow or stream channel diversions proposed?

(XXX) Yes ( ) No

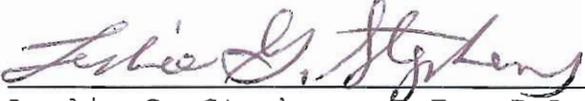
If yes, complete the following:

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

Applicant: Best Coal, Inc.  
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CERTIFICATION STATEMENT:

I hereby certify that Attachment III-B.-2.A prepared for Best Coal, Inc.'s Narley Mine, are in accordance with the Regulations of the Alabama Surface Mining Commission as adopted by Act 81-435 of December 18, 1981 and amended to date, and are true and correct to the best of my knowledge and belief.

  
Leslie G. Stephens, P.E., P.L.S  
AL Registration No. 14117-E

12/05/2011  
Date



Applicant: Best Coal, Inc.  
Mine Name: Narley Mine  
Permit Number: P- 3850, Revision R-8

Attachment III-B-2(a)

ADDENDUM TO THE GENERAL PLAN

The addendum to the general plan consists of updating the drainage control plan through the addition of Basin 026P and the re-evaluation of Basin 005E. SedCad 4 runs are enclosed for the re-evaluation of Basin 005E.

Prior to disturbance within the watershed of Basin 026P detailed design plans will be submitted to the Regulatory Authority and upon written approval, Basin 026P will be constructed and certified to the Regulatory Authority.

Basin 026P is to be a temporary impoundment. Basin removal plans will be submitted to the regulatory authority prior to Phase II Bond Release. (See attached data and watershed map for basin location and preliminary hydrologic information)

Geologic investigations of the area indicate layers of sandstone, shale and minor amounts of bituminous coal and underclay. The coal to be mined by Best Coal, Inc. will be confined to the New Castle Seam, Mary Lee Seam and Blue Creek Seam of the Mary Lee Coal Group. The strata in the area is characterized by small scale normal faulting and gentle open folding.

All surface drainage from the proposed mining area flows into Trouble Creek and Whites Creek which drains into the Mulberry Fork of the Black Warrior River.

All diversions are to be temporary and will be re-graded and revegetated. (See diversion ditch criteria).

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

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

See Attachment III-B-2(a), SedCad runs for Basin 005E Re-evaluation.

See Attachment III-B-2(a), Basin 026P detailed design plans.

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Attachment III-B-2-A

Basin No.	Location	Drainage Area (Acres)
005E	SW 1/4 of NE 1/4 & NW 1/4 of SE 1/4, Sec. 24, T.15 S. R. 4 W.	242
026P	NW 1/4 of SE 1/4, Sec. 24, T.15 S. R. 4 W.	277

All basins are located in Jefferson County, Alabama, as found on the Brookside USGS Quadrangle.



Alabama Department of Environmental Management  
adem.alabama.gov

1400 Coliseum Blvd. 36110-2400 ■ Post Office Box 301463  
Montgomery, Alabama 36130-1463  
(334) 271-7700 ■ FAX (334) 271-7950

May 31, 2012

Otis R. Robison, Jr.  
President  
Best Coal, Inc.  
2361 Cumberland Lake Drive  
Pinson, Alabama 35126

**RE: Outfall 026P Relocation Request**  
Narley Mine  
NPDES Permit AL0075752  
Jefferson County (073)

Dear Mr. Robison:

The Department has received an Outfall Relocation Request letter dated May 30, 2012, submitted by PERC Engineering Co., Inc. for Best Coal, Inc. The request proposes the relocation of Outfall 026P at Narley Mine from Latitude N 33° 42' 56," Longitude E -86° 54' 19" to Latitude N 33° 43' 05", Longitude E -86° 54' 25".

The Department has reviewed the document and has determined that relocation of Outfall 026P does not require a modification of the NPDES Permit. Therefore, the request is approved.

If you have any questions regarding this matter, you may contact Andrew Burroughs at 334-274-4197 or [aburroughs@adem.state.al.us](mailto:aburroughs@adem.state.al.us).

Sincerely,

A handwritten signature in black ink, appearing to read 'Vernon H. Crockett'.

Vernon H. Crockett, Chief  
NPDES Stormwater Management Branch  
Water Division

VHC/apb

File: BASF/21192

cc: Johnathan E. Hall, ADEM – Water Division  
Andrew Burroughs, ADEM – Water Division  
Heath Franks, PERC Engineering Co., Inc. ([hfranks@percengineering.com](mailto:hfranks@percengineering.com))





Telephone: (205) 384-5553  
Facsimile: (205) 295-3114 - Main Building  
(205) 295-3115 - Water Lab  
Web Address: [www.percengineering.com](http://www.percengineering.com)

May 30, 2012

Mr. Johnathan Hall  
Mining & Natural Resources Section  
NPDES Permits Branch  
Alabama Department of Environmental Management  
1400 Coliseum Blvd.  
Montgomery, AL 36110-2059

RE: Best Coal, Inc.  
Narley Mine NPDES Administrative Update  
AL0075752

Dear Mr. Hall:

Attached please find attached updated pages for the Narley Mine NPDES application for the relocation of Outfall 026P for the above referenced facility.

If you require additional information, please feel free to call me at (205) 295-3112.

Thank You,  
PERC Engineering Co., Inc.

A handwritten signature in black ink that reads "Heath Franks". The signature is written in a cursive, flowing style.

Heath Franks  
Environmental Scientist  
(205) 295-3112  
[hfranks@percengineering.com](mailto:hfranks@percengineering.com)  
For Best Coal, Inc.

XVII. RECEIVING WATERS

List the requested permit Action for each outfall (issue, reissue, add, delete, move, etc.), Outfall Designation including noting "E" for existing and "P" for proposed, name of receiving water(s), ADEM water use classification (WUC) for the receiving water, latitude and longitude (to seconds) of location(s) that run-off enters the receiving water, distance of receiving water from outfall in feet, number of disturbed acres, the number of drainage acres which will drain through each treatment system, outfall, or BMP, and if the outfall discharges to an ADEM listed CWA Section 303(d) waterbody segment at the time of application submittal.

Action	Outfall E/P	Receiving Water	ADEM WUC	Latitude	Longitude	Distance to Rec. Water	Disturbed Acres	Drainage Acres	303(d) Segment (Y/N)
None	001P	Trouble Creek	F & W	33° 43' 30"	86°54'56"	100'	28	34	N
None	002P	U.T. to Trouble Creek	F & W	33° 43' 24"	86°54'44"	150'	47	226	N
None	003P	Trouble Creek	F & W	33° 43' 12"	86°54'31"	100'	23	31	N
None	004E	Trouble Creek	F & W	33° 43' 27"	86°54'39"	430'	46	64	N
None	005E	U.T. to Trouble Creek	F & W	33° 43' 12"	86°54'22"	100'	169	268	N
None	006P	Whites Creek	F & W	33° 43' 51"	86°53'55"	250'	57	84	N
None	007E	U.T. to Whites Creek	F & W	33° 43' 48"	86°54'35"	Directly	83	101	N
None	008E	Whites Creek	F & W	33° 43' 47"	86°53'58"	800'	51	63	N
None	009P	Locust Fork	F & W	33° 44' 00"	86°55'19"	900'	38	57	N
None	010P	Locust Fork	F & W	33° 44' 06"	86°55'28"	210'	19	19	N
None	011P	Locust Fork	F & W	33° 44' 05"	86°55'46"	470'	17	17	N
None	012P	Locust Fork	F & W	33° 44' 09"	86°55'56"	390'	29	29	N
None	013P	Locust Fork	F & W	33° 44' 12"	86°56'02"	150'	7	7	N
None	014P	Locust Fork	F & W	33° 44' 12"	86°56'11"	450'	8	8	N
None	015P	Locust Fork	F & W	33° 44' 10"	86°56'18"	850'	7	8	N
None	016P	Trouble Creek	F & W	33° 43' 51"	86°56'19"	850'	20	23	N
None	017P	Trouble Creek	F & W	33° 43' 51"	86°56'11"	1300'	23	23	N
None	018P	Trouble Creek	F & W	33° 43' 50"	86°56'03"	570'	8	8	N
None	019P	Trouble Creek	F & W	33° 43' 49"	86°55'58"	620'	16	16	N
None	020P	Trouble Creek	F & W	33° 43' 44"	86°55'50"	620'	15	15	N
None	021P	Trouble Creek	F & W	33° 43' 45"	86°55'42"	780'	54	54	N
None	022P	Trouble Creek	F & W	33° 43' 39"	86°55'36"	240'	25	25	N
None	023P	Trouble Creek	F & W	33° 43' 39"	86°55'26"	200'	18	18	N
None	024P	Trouble Creek	F & W	33° 43' 40"	86°55'19"	170'	23	23	N
None	025P	Trouble Creek	F & W	33° 43' 38"	86°55'11"	150'	10	10	N
None	026P	Trouble Creek	F & W	33° 43' 05"	86°54'25"	Directly	195	279	N
None	027P	Trouble Creek	F & W	33° 42' 52"	86°54'17"	100'	30	78	N
None	028P	Trouble Creek	F & W	33° 42' 47"	86°54'17"	160'	8	62	N
None	029P	Trouble Creek	F & W	33° 42' 46"	86°54'20"	150'	7	23	N
None	030P	Trouble Creek	F & W	33° 42' 55"	86°54'22"	150'	11	11	N
None	031P	Trouble Creek	F & W	33° 42' 59"	86°54'24"	150'	20	20	N
None	032P	Trouble Creek	F & W	33° 43' 34"	86°55'07"	200'	16	16	N
None	033P	Trouble Creek	F & W	33° 43' 36"	86°55'13"	150'	10	10	N
None	034P	Trouble Creek	F & W	33° 43' 37"	86°55'20"	150'	7	7	N
None	035P	U.T. to Trouble Creek	F & W	33° 43' 31"	86°55'32"	450'	12	12	N
None	036P	U.T. to Trouble Creek	F & W	33° 43' 23"	86°55'34"	170'	33	33	N
None	037P	U.T. to Trouble Creek	F & W	33° 43' 15"	86°55'33"	150'	44	44	N
None	038P	U.T. to Trouble Creek	F & W	33° 43' 07"	86°55'30"	100'	7	7	N
None	039P	U.T. to Trouble Creek	F & W	33° 43' 01"	86°55'22"	100'	33	33	N
None	040P	U.T. to Trouble Creek	F & W	33° 42' 50"	86°55'24"	100'	66	137	N
None	041P	U.T. to Trouble Creek	F & W	33° 43' 09"	86°55'32"	Directly	111	349	N

VII. RECEIVING WATERS (CONTINUED)

List the requested permit Action for each outfall (issue, reissue, add, delete, move, etc.), Outfall Designation including noting "E" for existing and "P" for proposed, name of receiving water(s), ADEM water use classification (WUC) for the receiving water, latitude and longitude (to seconds) of location(s) that run-off enters the receiving water, distance of receiving water from outfall in feet, number of disturbed acres, the number of drainage acres which will drain through each treatment system, outfall, or BMP, and if the outfall discharges to an ADEM listed CWA Section 303(d) waterbody segment at the time of application submittal.

Action	Outfall E/P	Receiving Water	ADEM WUC	Latitude	Longitude	Distance to Rec. Water	Disturbed Acres	Drainage Acres	303(d) Segment (Y/N)
Add	042P	U.T. to Trouble Creek	F & W	33° 43' 10"	86°55'34"	Directly	58	314	N
Add	043P	U.T. to Trouble Creek	F & W	33° 43' 24"	86°55'37"	Directly	356	473	N
Add	044P	U.T. to Trouble Creek	F & W	33° 43' 21"	86°55'41"	625'	36	67	N
Add	045P	U.T. to Trouble Creek	F & W	33° 43' 29"	86°55'39"	100'	26	27	N
Add	046P	Trouble Creek	F & W	33° 43' 38"	86°55'55"	100'	43	60	N
Add	047P	Trouble Creek	F & W	33° 43' 37"	86°56'13"	100'	38	45	N
Add	048P	Locust Fork	F & W	33° 43' 27"	86°56'36"	680'	42	59	N
Add	049P	Trouble Creek	F & W	33° 43' 44"	86°56'21"	100'	30	30	N
Add	050P	Trouble Creek	F & W	33° 43' 42"	86°56'28"	100'	4	4	N
Add	051P	Locust Fork	F & W	33° 43' 46"	86°56'30"	100'	7	7	N
Add	052P	Locust Fork	F & W	33° 43' 50"	86°56'30"	100'	15	15	N
Add	053P	Locust Fork	F & W	33° 43' 59"	86°56'31"	100'	9	9	N
Add	054P	Locust Fork	F & W	33° 44' 06"	86°56'32"	100'	17	17	N
Add	055P	Locust Fork	F & W	33° 44' 16"	86°56'17"	100'	36	36	N
Add	056P	Locust Fork	F & W	33° 44' 09"	86°55'45"	100'	26	26	N
Add	057P	Locust Fork	F & W	33° 44' 08"	86°55'22"	100'	73	73	N
Add	058P	U.T. to Locust Fork	F & W	33° 43' 59"	86°54'46"	100'	20	21	N
Add	059P	U.T. to Locust Fork	F & W	33° 44' 05"	86°54'55"	100'	16	16	N
Add	060P	Whites Creek	F & W	33° 44' 13"	86°54'51"	100'	10	10	N
Add	061P	Whites Creek	F & W	33° 44' 15"	86°54'39"	100'	24	24	N
Add	062P	Whites Creek	F & W	33° 44' 11"	86°54'27"	100'	32	36	N
Add	063P	Whites Creek	F & W	33° 44' 10"	86°54'19"	100'	10	10	N
Add	064P	Whites Creek	F & W	33° 44' 05"	86°54'10"	100'	31	41	N
Add	065P	Whites Creek	F & W	33° 44' 02"	86°54'03"	100'	10	10	N
Add	066P	Whites Creek	F & W	33° 43' 48"	86°53'29"	100'	12	12	N
Add	067P	U.T. to Whites Creek	F & W	33° 43' 54"	86°53'17"	2300'	28	28	N
Add	068P	U.T. to Crooked Creek	F & W	33° 43' 48"	86°53'05"	1380'	12	12	N
Add	069P	U.T. to Whites Creek	F & W	33° 43' 38"	86°53'33"	800'	15	15	N
Add	070P	U.T. to Whites Creek	F & W	33° 43' 46"	86°53'37"	560'	6	6	N
Add	071P	U.T. to Whites Creek	F & W	33° 43' 47"	86°53'42"	630'	6	6	N
Add	072P	U.T. to Trouble Creek	F & W	33° 42' 48"	86°54'18"	Directly	83	128	N
Add	073P	U.T. to Locust Fork	F & W	33° 43' 54"	86°54'46"	100'	12	15	N
Add	074P	U.T. to Locust Fork	F & W	33° 44' 00"	86°54'52"	100'	16	17	N
Add	075P	U.T. to Locust Fork	F & W	33° 44' 05"	86°55'01"	100'	10	10	N
Add	076P	U.T. to Locust Fork	F & W	33° 44' 10"	86°55'04"	100'	10	10	N
Add	077P	Trouble Creek	F & W	33° 43' 37"	86°55'09"	100'	20	20	N
Add	078P	Trouble Creek	F & W	33° 43' 37"	86°55'05"	100'	24	24	N
Add	079P	Trouble Creek	F & W	33° 43' 45"	86°55'59"	100'	42	42	N
Add	080P	Trouble Creek	F & W	33° 43' 40"	86°56'13"	100'	41	41	N
Add	081P	Locust Fork	F & W	33° 44' 11"	86°55'55"	100'	30	30	N

\* Total Disturbed Acres in Part XVII does not equal that of Part V due to overlapping watersheds.

XVIII. DISCHARGE CHARACTERIZATION

- Yes, pursuant to 40 CFR 122.21, the applicant requests a waiver for completion of EPA forms 2C and/or 2D and certifies that the operating facility will discharge treated stormwater only, unless waived in writing by the Department on a programmatic, categorical, or individual compound/chemical basis that chemical/compound additives are not used, and that there are no process, manufacturing, or other industrial operations or wastewaters, including but not limited to lime or cement production, synfuel operations, etc.
- No, the applicant does not request a waiver and a complete and correct EPA form 2C and/or 2D is attached.

If a completed EPA form 2C and/or 2D is not attached, the applicant is required to supply the following information separately for every P or E outfall. If necessary, attach extra sheets. List expected average daily discharge flow rate in gallons/day and in cfs, frequency of discharge in hours per day and days per month, average summer and winter temperature of discharge(s) in degrees centigrade (C), average daily discharge in pounds per day of Total Iron, Total Manganese, BOD<sub>5</sub>, Total Aluminum (if bauxite or bauxitic clay), and Total Suspended Solids: **Source of Information is from Best Professional Estimate and data from similar projects (DFSP) adjacent to this site with similar overburden and mining on the same coal seam.**

Outfall E/P	Information Source - # of Samples	Flow cfs	Flow gpd	Frequency hours/day	Frequency days/mnth	pH s.u.	BOD <sub>5</sub> lbs/day	Sum/Win Temp, C.	TSS lbs/day	Tot Fe lbs/day	Tot Mn lbs/day	Tot Al lbs/day
001P	BPE	0.079	51K	Precipitation	Precipitation	7.74	0.85	26/7	3	0.15	0.89	N/A
002P	BPE	0.529	342K	Precipitation	Precipitation	7.74	5.69	26/7	14	1.02	11.39	N/A
003P	BPE	0.073	47K	Precipitation	Precipitation	7.74	0.78	26/7	2	0.14	3.13	N/A
004E	DFSP - 3	0.150	97K	Precipitation	Precipitation	7.74	1.61	26/7	4	0.29	6.26	N/A
005E	DMR's - 18	0.467	302K	Precipitation	Precipitation	7.49	5.02*	26/7	50	1.24	11.31*	N/A
006P	DFSP - 2	0.229	148K	Precipitation	Precipitation	7.10	2.46	26/7	6	0.25	4.92	N/A
007E	DMR's - 8	0.020	13K	Precipitation	Precipitation	7.25	0.21*	26/7	2	0.11	0.48*	N/A
008E	DMR's - 5	0.046	30K	Precipitation	Precipitation	6.99	0.49	26/7	18	0.72	1.11*	N/A
009P	BPE	0.133	85K	Precipitation	Precipitation	6-9	1.42	26/7	53	4.47	3.22	N/A
010P	BPE	0.044	28K	Precipitation	Precipitation	6-9	0.47	26/7	17	1.48	1.06	N/A
011P	BPE	0.039	25K	Precipitation	Precipitation	6-9	0.41	26/7	15	1.31	0.94	N/A
012P	BPE	0.067	43K	Precipitation	Precipitation	6-9	0.71	26/7	27	2.25	1.62	N/A
013P	BPE	0.016	10K	Precipitation	Precipitation	6-9	0.17	26/7	6	0.53	0.38	N/A
014P	BPE	0.018	11K	Precipitation	Precipitation	6-9	0.19	26/7	7	0.60	0.43	N/A
015P	BPE	0.018	11K	Precipitation	Precipitation	6-9	0.19	26/7	7	0.60	0.43	N/A
016P	BPE	0.053	34K	Precipitation	Precipitation	6-9	0.56	26/7	21	1.78	1.28	N/A
017P	BPE	0.053	34K	Precipitation	Precipitation	6-9	0.56	26/7	21	1.78	1.28	N/A
018P	BPE	0.018	11K	Precipitation	Precipitation	6-9	0.19	26/7	7	0.60	0.43	N/A
019P	BPE	0.037	23K	Precipitation	Precipitation	6-9	0.39	26/7	14	1.24	0.89	N/A
020P	BPE	0.035	22K	Precipitation	Precipitation	6-9	0.37	26/7	14	1.17	0.84	N/A
021P	BPE	0.126	81K	Precipitation	Precipitation	6-9	1.35	26/7	50	4.23	3.05	N/A
022P	BPE	0.058	37K	Precipitation	Precipitation	6-9	0.62	26/7	23	1.95	1.40	N/A
023P	BPE	0.042	27K	Precipitation	Precipitation	6-9	0.45	26/7	16	1.41	1.01	N/A
024P	BPE	0.053	34K	Precipitation	Precipitation	6-9	0.56	26/7	21	1.78	1.28	N/A
025P	BPE	0.023	14K	Precipitation	Precipitation	6-9	0.24	26/7	9	0.77	0.55	N/A
026P	BPE	0.486	314K	Precipitation	Precipitation	6-9	5.22	26/7	196	16.35	11.77	N/A
027P	BPE	0.182	117K	Precipitation	Precipitation	6-9	1.95	26/7	73	6.12	4.40	N/A
028P	BPE	0.145	93K	Precipitation	Precipitation	6-9	1.55	26/7	58	4.87	3.51	N/A
029P	BPE	0.053	34K	Precipitation	Precipitation	6-9	0.56	26/7	21	1.78	1.28	N/A
030P	BPE	0.025	16K	Precipitation	Precipitation	6-9	0.26	26/7	10	0.84	0.60	N/A
031P	BPE	0.046	29K	Precipitation	Precipitation	6-9	0.49	26/7	18	1.54	1.11	N/A
032P	BPE	0.037	23K	Precipitation	Precipitation	6-9	0.39	26/7	14	1.24	0.89	N/A
033P	BPE	0.023	14K	Precipitation	Precipitation	6-9	0.24	26/7	9	0.77	0.55	N/A
034P	BPE	0.016	10K	Precipitation	Precipitation	6-9	0.17	26/7	6	0.53	0.38	N/A
035P	BPE	0.028	18K	Precipitation	Precipitation	6-9	0.30	26/7	11	0.94	0.67	N/A
036P	BPE	0.077	49K	Precipitation	Precipitation	6-9	0.82	26/7	31	2.59	1.86	N/A
037P	BPE	0.103	66K	Precipitation	Precipitation	6-9	1.10	26/7	41	3.46	2.49	N/A
038P	BPE	0.016	10K	Precipitation	Precipitation	6-9	0.17	26/7	6	0.53	0.38	N/A
039P	BPE	0.077	49K	Precipitation	Precipitation	6-9	0.82	26/7	31	2.59	1.86	N/A
040P	BPE	0.321	207K	Precipitation	Precipitation	6-9	3.44	26/7	129	10.79	7.77	N/A
041P	BPE	0.817	528K	Precipitation	Precipitation	6-9	8.76	26/7	329	27.48	19.79	N/A

\* BOD<sub>5</sub> is calculated by Best Professional Estimate. Also, the Narley Mine has a Mn exemption and is calculated by Best Professional Estimate.

XVIII. DISCHARGE CHARACTERIZATION (CONTINUED)

- Yes, pursuant to 40 CFR 122.21, the applicant requests a waiver for completion of EPA forms 2C and/or 2D and certifies that the operating facility will discharge treated stormwater only, unless waived in writing by the Department on a programmatic, categorical, or individual compound/chemical basis that chemical/compound additives are not used, and that there are no process, manufacturing, or other industrial operations or wastewaters, including but not limited to lime or cement production, synfuel operations, etc.
- No, the applicant does not request a waiver and a complete and correct EPA form 2C and/or 2D is attached.

If a completed EPA form 2C and/or 2D is not attached, the applicant is required to supply the following information separately for every P or E outfall. If necessary, attach extra sheets. List expected average daily discharge flow rate in gallons/day and in cfs, frequency of discharge in hours per day and days per month, average summer and winter temperature of discharge(s) in degrees centigrade (C), average daily discharge in pounds per day of Total Iron, Total Manganese, BOD<sub>5</sub>, Total Aluminum (if bauxite or bauxitic clay), and Total Suspended Solids: **Source of Information is from Best Professional Estimate.**

Outfall E/P	Information Source - # of Samples	Flow cfs	Flow gpd	Frequency hours/day	Frequency days/mnth	pH s.u.	BOD <sub>5</sub> lbs/day	Sum/Winter Temp, C.	TSS lbs/day	Tot Fe lbs/day	Tot Mn lbs/day	Tot Al lbs/day
042P	BPE	0.547	353K	Precipitation	Precipitation	6-9	5.87	26/7	220	18.40	13.25	N/A
043P	BPE	0.824	532K	Precipitation	Precipitation	6-9	8.85	26/7	332	27.72	19.96	N/A
044P	BPE	0.116	74K	Precipitation	Precipitation	6-9	1.24	26/7	46	3.90	2.81	N/A
045P	BPE	0.047	30K	Precipitation	Precipitation	6-9	0.50	26/7	18	1.58	1.13	N/A
046P	BPE	0.104	67K	Precipitation	Precipitation	6-9	1.11	26/7	41	3.49	2.51	N/A
047P	BPE	0.078	50K	Precipitation	Precipitation	6-9	0.83	26/7	31	2.62	1.88	N/A
048P	BPE	0.102	65K	Precipitation	Precipitation	6-9	1.09	26/7	41	3.43	2.47	N/A
049P	BPE	0.052	33K	Precipitation	Precipitation	6-9	0.55	26/7	20	1.74	1.25	N/A
050P	BPE	0.006	3K	Precipitation	Precipitation	6-9	0.06	26/7	2	0.20	0.14	N/A
051P	BPE	0.012	7K	Precipitation	Precipitation	6-9	0.12	26/7	4	0.40	0.29	N/A
052P	BPE	0.026	16K	Precipitation	Precipitation	6-9	0.27	26/7	10	0.87	0.62	N/A
053P	BPE	0.015	9K	Precipitation	Precipitation	6-9	0.16	26/7	6	0.50	0.36	N/A
054P	BPE	0.135	87K	Precipitation	Precipitation	6-9	1.45	26/7	54	4.54	3.27	N/A
055P	BPE	0.062	40K	Precipitation	Precipitation	6-9	0.66	26/7	25	2.08	1.50	N/A
056P	BPE	0.045	29K	Precipitation	Precipitation	6-9	0.48	26/7	18	1.51	1.09	N/A
057P	BPE	0.127	82K	Precipitation	Precipitation	6-9	1.36	26/7	51	4.27	3.07	N/A
058P	BPE	0.036	23K	Precipitation	Precipitation	6-9	0.38	26/7	14	1.21	0.87	N/A
059P	BPE	0.027	17K	Precipitation	Precipitation	6-9	0.29	26/7	10	0.90	0.65	N/A
060P	BPE	0.017	10K	Precipitation	Precipitation	6-9	0.18	26/7	6	0.57	0.41	N/A
061P	BPE	0.041	26K	Precipitation	Precipitation	6-9	0.44	26/7	16	1.37	0.99	N/A
062P	BPE	0.062	40K	Precipitation	Precipitation	6-9	0.66	26/7	25	2.08	1.50	N/A
063P	BPE	0.017	10K	Precipitation	Precipitation	6-9	0.18	26/7	6	0.57	0.41	N/A
064P	BPE	0.071	45K	Precipitation	Precipitation	6-9	0.76	26/7	28	2.38	1.71	N/A
065P	BPE	0.017	10K	Precipitation	Precipitation	6-9	0.18	26/7	6	0.57	0.41	N/A
066P	BPE	0.020	12K	Precipitation	Precipitation	6-9	0.21	26/7	8	0.67	0.48	N/A
067P	BPE	0.048	31K	Precipitation	Precipitation	6-9	0.51	26/7	19	1.61	1.16	N/A
068P	BPE	0.020	12K	Precipitation	Precipitation	6-9	0.21	26/7	8	0.67	0.48	N/A
069P	BPE	0.026	16K	Precipitation	Precipitation	6-9	0.27	26/7	10	0.87	0.62	N/A
070P	BPE	0.010	6K	Precipitation	Precipitation	6-9	0.10	26/7	4	0.33	0.24	N/A
071P	BPE	0.010	6K	Precipitation	Precipitation	6-9	0.10	26/7	4	0.33	0.24	N/A
072P	BPE	0.223	144K	Precipitation	Precipitation	6-9	2.39	26/7	90	7.50	5.40	N/A
073P	BPE	0.026	16K	Precipitation	Precipitation	6-9	0.27	26/7	10	0.87	0.62	N/A
074P	BPE	0.135	87K	Precipitation	Precipitation	6-9	1.45	26/7	54	4.54	3.27	N/A
075P	BPE	0.017	10K	Precipitation	Precipitation	6-9	0.18	26/7	6	0.57	0.41	N/A
076P	BPE	0.017	10K	Precipitation	Precipitation	6-9	0.18	26/7	6	0.57	0.41	N/A
077P	BPE	0.034	21K	Precipitation	Precipitation	6-9	0.36	26/7	13	1.14	0.82	N/A
078P	BPE	0.041	26K	Precipitation	Precipitation	6-9	0.44	26/7	16	1.37	0.99	N/A
079P	BPE	0.073	47K	Precipitation	Precipitation	6-9	0.78	26/7	29	2.45	1.76	N/A
080P	BPE	0.071	45K	Precipitation	Precipitation	6-9	0.76	26/7	28	2.38	1.71	N/A
081P	BPE	0.052	33K	Precipitation	Precipitation	6-9	0.55	26/7	20	1.74	1.25	N/A

\* BOD<sub>5</sub> is calculated by Best Professional Estimate. Also, the Narley Mine has a Mn exemption and is calculated by Best Professional Estimate.

XIX. DISCHARGE STRUCTURE DESCRIPTION AND POLLUTANT SOURCE

If a completed EPA form 2C and/or 2D is not attached, the applicant is required to detail existing and proposed point source(s) covered by this permit application. Specify outfall number(s) as it appears on the map(s) required by this application [if this application is for a modification to an existing permit do not change the numbering sequence of the permitted outfalls], describe each, e.g. pipe, spillway, channel, tunnel, conduit, well, discrete fissure, or container, and identify the origin of pollutants. The response must be precise for each outfall. If the discharge of pollutants from any outfall is the result of commingling of waste streams from different origins, each origin must be completely described. Please check all responses which describe the discharge origin.

Outfall	Discharge structure Description	Description of Origin Of pollutants	Surface Discharge	Groundwater Discharge	Wet Prep -Other Production Plant	Pumped or Controlled Discharge	Low Volume STP	Other
001P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
002P	Pipe and/or Channel	(2) , (9), & (10)	X	N/A	N/A	N/A	N/A	N/A
003P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
004E	Pipe	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
005E	Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
006P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
007E	Channel	((2) , (9), & (10)	X	N/A	X	N/A	N/A	N/A
008E	Pipe	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
009P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
010P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
011P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
012P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
013P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
014P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
015P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
016P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
017P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
018P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
019P	Pipe and/or Channel	(2) , (9), & (10)	X	N/A	N/A	N/A	N/A	N/A
020P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
021P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
022P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
023P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
024P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
025P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
026P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
027P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
028P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
029P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
030P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
031P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
032P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
033P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
034P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
035P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
036P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
037P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
038P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
039P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
040P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
041P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A

Origin of Pollutants – typical examples: (1) Discharge of drainage from the underground workings of an underground coal mine, (2) Discharge of drainage from a coal surface mine, (3) Discharge of drainage from a coal preparation plant and associated areas, (4) Discharge of process wastewater from a gravel-washing plant, (5) Discharge of wastewater from an existing source coal preparation plant, (6) Discharge of drainage from a sand and gravel pit, (7) Pumped discharge from a limestone quarry, (8) Controlled surface mine drainage (pumped or siphoned), (9) Discharge of drainage from mine reclamation, (10) Other: Dry Processing (Crushing and Screening)

XIX. DISCHARGE STRUCTURE DESCRIPTION AND POLLUTANT SOURCE ( CONTINUED)

If a completed EPA form 2C and/or 2D is not attached, the applicant is required to detail existing and proposed point source(s) covered by this permit application. Specify outfall number(s) as it appears on the map(s) required by this application [if this application is for a modification to an existing permit do not change the numbering sequence of the permitted outfalls], describe each, e.g. pipe, spillway, channel, tunnel, conduit, well, discrete fissure, or container, and identify the origin of pollutants. The response must be precise for each outfall. If the discharge of pollutants from any outfall is the result of commingling of waste streams from different origins, each origin must be completely described. Please check all responses which describe the discharge origin.

Outfall	Discharge structure Description	Description of Origin Of pollutants	Surface Discharge	Groundwater Discharge	Wet Prep -Other Production Plant	Pumped or Controlled Discharge	Low Volume STP	Other
042P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
043P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
044P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
045P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
046P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
048P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
049P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
050P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
051P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
052P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
053P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
054P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
055P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
056P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
057P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
058P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
059P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
060P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
061P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
062P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
063P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
064P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
065P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
066P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
067P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
068P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
069P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
070P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
071P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
072P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
073P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
074P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
075P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
076P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
077P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
078P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
079P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
080P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A
081P	Pipe and/or Channel	(2) & (9)	X	N/A	N/A	N/A	N/A	N/A

Origin of Pollutants – typical examples: (1) Discharge of drainage from the underground workings of an underground coal mine, (2) Discharge of drainage from a coal surface mine, (3) Discharge of drainage from a coal preparation plant and associated areas, (4) Discharge of process wastewater from a gravel-washing plant, (5) Discharge of wastewater from an existing source coal preparation plant, (6) Discharge of drainage from a sand and gravel pit, (7) Pumped discharge from a limestone quarry, (8) Controlled surface mine drainage (pumped or siphoned), (9) Discharge of drainage from mine reclamation, (10) Other: Dry Processing (Crushing and Screening)

XXI. POLLUTION ABATEMENT PLAN (PAP) - APPENDIX A& B INFORMATION

**Outfall(s): 001P-003P, 004E, 005E, 006P, 007E, 008E, 009P-081P**

Y	N	N/A	
x			Runoff from all areas of disturbance is controlled
x			Drainage from pit area, stockpiles, and spoil areas directed to a sedimentation pond
	X1		Sedimentation basin at least 0.25 acre/feet for every acre of disturbed drainage
	X2		Sedimentation basin cleaned out when sediment accumulation is 60% of design capacity
X			Trees, boulders, and other obstructions removed from pond during initial construction
	X3		Width of top of dam greater than 12'
	X4		Side slopes of dam no steeper than 3:1
X			Cutoff trench at least 8' wide
X			Side slopes of cutoff trench no less than 1:1
X			Cutoff trench located along the centerline of the dam
X			Cutoff trench extends at least 2' into bedrock or impervious soil
X			Cutoff trench filled with impervious material
X			Embankments and cutoff trench 95% compaction standard proctor ASTM
X			Embankment free of roots, tree debris, stones >6" diameter, etc.
X			Embankment constructed in lifts no greater than 12"
X			Spillpipe sized to carry peak flow from a one year storm event
X			Spillpipe will not chemically react with effluent
X			Subsurface withdrawal
	X5		Anti-seep collars extend radially at least 2' from each joint in spillpipe
X			Splashpad at the end of the spillpipe
	X6		Emergency Spillway sized for peak flow from 25-yr 24-hr event if discharge not into PWS classified stream
	X7		Emergency spillway sized for peak flow from 50-yr 24-hr event if discharge is into PWS classified stream
X			Emergency overflow at least 20' long
X			Side slopes of emergency spillway no steeper than 2:1
	X8		Emergency spillway lined with riprap or concrete
X			Minimum of 1.5' of freeboard between normal overflow and emergency overflow
	X9		Minimum of 1.5' of freeboard between max. design flow of emergency spillway and top of dam
X			All emergency overflows are sized to handle entire drainage area for ponds in series
X			Dam stabilized with permanent vegetation
X			Sustained grade of haul road <10%
	X10		Maximum grade of haul road <15% for no more than 300'
X			Outer slopes of haul road no steeper than 2:1
X			Outer slopes of haul road vegetated or otherwise stabilized
	X11		Detail drawings supplied for all stream crossings
X			Short-Term Stabilization/Grading And Temporary Vegetative Cover Plans
X			Long-Term Stabilization/Grading And Permanent Reclamation or Water Quality Remediation Plans

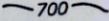
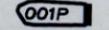
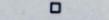
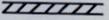
The applicant has completed the surface water discharge alternatives analysis and has supporting documentation, including annualized costs for each technically feasible alternative available for review upon request

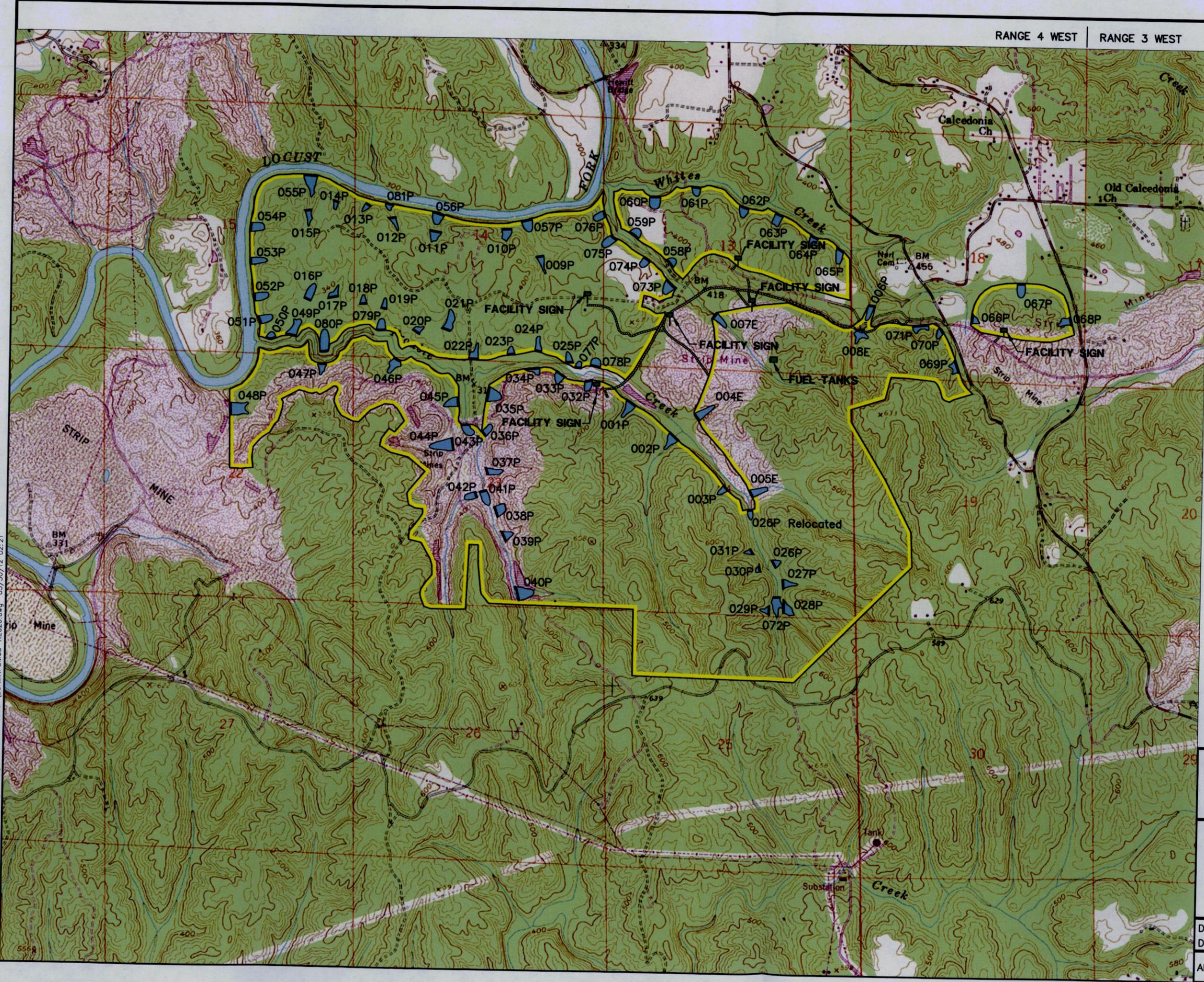
**IDENTIFY AND PROVIDE DETAILED EXPLANATION FOR ANY "N" OR "N/A" RESPONSE(s):**

X1)	During the design of each basin a sediment storage volume and detention volume will be determined and reviewed and approved by the ASMC.
X2)	Sediment will be removed from each basin prior to the design sediment volume or level being reached.
X3)	The top width of the dam will be no less than 12 feet wide as required by ASMC regulations.
X4)	The side slopes of the embankment of each basin will be designed to provide a minimum static factor of safety of 1.3 as required by ASMC regulations.
X5)	No anti seep collars are proposed along the discharge pipe as a result of the experience in the design and construction of impoundments of this nature by the designer. It has been the designer's experience that the addition of anti seep collars requires the over excavation of the discharge structure trench for their installation. This over excavation and direct areas around the devices produce areas where compaction during the filling of the trench is difficult to achieve. This results in areas of weakness where potential seeps could occur resulting in areas of impoundment instability and possible failure. The designer has designed and overseen construction of numerous impoundments of similar nature without the use of anti seep collars. To date no areas of seepage or instability has occurred as a result of the deletion of the anti seep collars. With the above in mind no anti seep collars are proposed in this design.
X6)	As per ASMC regulations the emergency spillways of each basin will be designed to pass a 25 year - 6 hour storm event.
X7)	This facility does not discharge to a public water supply.
X8)	The entire emergency overflow spillway channel from each basin will be a stabilized channel and will be stabilized upon completion of construction as specified within the detailed design plans using prudent engineering measures. These measures may consist of lining the spillway with concrete or a durable rock riprap, or the spillway being constructed in consolidated non-erodible material and planted with a mixture or both annual and perennial grasses, or a combination of any or all of the above.
X9)	During the design of each basin a minimum freeboard between normal overflow and emergency overflow will be determined and reviewed and approved by the ASMC.
X9)	ASMC regulations allow for a minimum freeboard of 1.0 feet from the maximum height of a 25 year - 6 hour storm event to the top of the dam.
X10)	ASMC regulations allow for a maximum grade of 17% on primary haulroads.
X11)	This facility does not require stream crossings.

RANGE 4 WEST | RANGE 3 WEST

### LEGEND

-  Permit Boundary
-  700 Surface Contour
-  Sediment Basin
-  Natural Drainage Course
-  Diversion Ditch/Berm
-  Occupied Dwelling and Manufactured Housing
-  Out Building (Barn, Shed, etc.)
-  Haul Road
-  Ancillary Road
-  County Road (Paved unless otherwise designated)
-  Road (Private unless otherwise designated)



Scale: 1" = 2000'



**N.P.D.E.S. AL0075752 PERMIT MAP**  
**BEST COAL, INC.**  
**NARLEY MINE**  
**JEFFERSON COUNTY, ALABAMA**

DRAWN BY: J.H.F.	DATE: 5-30-12
DWG. NAME: BCNMNPDMDRE026	
APPROVED BY: J.H.F.	SCALE: 1"=2000'

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Applicant: Best Coal, Inc.  
Mine Name: Narley Mine  
Permit Number: P- 3850, Revision R-8

Attachment III-B-2-A

Pond Construction Criteria

The embankment for sediment basins (temporary and permanent) shall be designed and built using the following as minimum criteria:

1. The top of the dam shall be no less than 12 feet wide.
2. See design sheet for maximum and minimum embankment slopes.
3. The foundation and abutments for the impounding structure shall be designed to be stable under all conditions of construction and operation of the impoundments, with a minimum static safety factor of 1.5 for the normal pool with steady seepage saturation conditions, and a seismic safety factor of at least 1.20.
4. The dam shall be constructed with a cutoff trench based upon prudent engineering practices for the site. The cutoff shall be located on the dam centerline and be of sufficient depth to extend into a relatively impervious material from which the core of the dam shall also be constructed.
5. The embankment foundation area shall be cleared of all organic matter, all surfaces sloped to no steeper than 1v:1h, and the entire foundation surface scarified.
6. The entire embankment and cutoff trench shall be compacted to 95 percent density, based on standard proctor as outlined in ASTM.
7. The material placed in the embankment shall be free of sod, roots, stones over 6 inches in diameter, and other objectionable materials. The fill material shall be placed and spread over the entire fill area, starting at the lowest point of the foundation, in layers not to exceed 12 inches in thickness. Construction of the fill shall be undertaken only at such times that the moisture content of the fill material will permit satisfactory compaction in accordance with paragraph 5.

Applicant: Best Coal, Inc.  
Mine Name: Narley Mine  
Permit Number: P- 3850, Revision R-8

8. The pool area of the basin will be cleared of timber and large undergrowth.
9. The primary decant system when consisting of a pipe shall be installed according to Class C pipe installation for embankment bedding.
10. The primary decant system shall be equipped with a device, or constructed, such as to insure that subsurface withdrawal is accomplished to prevent discharge of floating solids. If a channel is used as the primary decant a skimmer shall be installed to prevent floating solids from discharging.
11. A splash pad or riprap may be required under the discharge of the primary decant system where necessary to insure that the discharge does not erode the embankment.
12. The combination primary and secondary decant system shall be designed to safely carry the expected peak flow from a 25 year - 6 hour storm. The entire emergency overflow spillway channel will be a stabilized channel and will be stabilized upon completion of construction as specified within the detailed design plans using prudent engineering measures. These measures may consist of lining the spillway with concrete or a durable rock riprap, or the spillway being constructed in consolidated non-erodible material and planted with a mixture or both annual and perennial grasses, or a combination of any or all of the above.
13. Sediment basins using a single spillway system shall be an open channel of non-erodible construction consisting of concrete, durable rock riprap or its being constructed in consolidated non-erodible material as specified in the detailed design plans.
14. The settled embankment for temporary impoundments shall be a minimum of 1.0 foot above the maximum water elevation for the runoff from a 25 year - 6 hour, or a 10 year - 24 hour precipitation event (whichever has the greatest runoff). The settled embankment for permanent impoundments shall be a

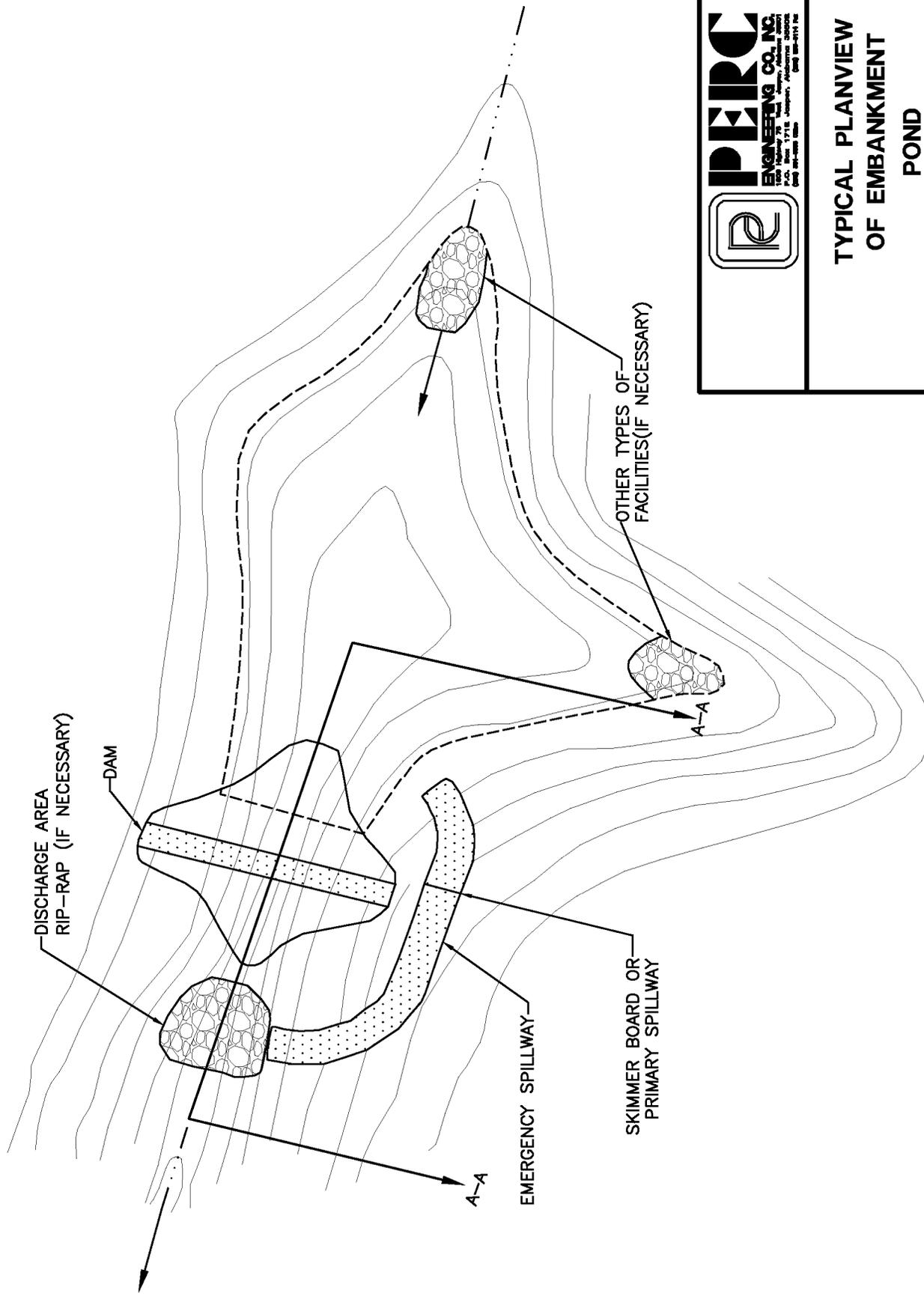
Applicant: Best Coal, Inc.  
Mine Name: Narley Mine  
Permit Number: P- 3850, Revision R-8

minimum of 1.0 foot above the maximum water elevation for the runoff from a 25 year - 6 hour, or a 10 year - 24 hour precipitation event (whichever has the greatest runoff).

15. If basins are built in series, then the combined decant system for each shall be designed to accommodate the entire contributing drainage area.
16. The dam and all disturbed areas shall be seeded with both perennial and annual grasses, fertilized and mulched in order to insure erosion is minimized. Hay bales or riprap may be placed at the toe of the dam immediately upon completion of construction.
17. The constructed height of the dam shall be increased a minimum of 5 percent over the design height to allow for settlement over the life of the embankment.
18. Final graded slopes of the entire permanent water impoundment area shall not exceed 2.5H-1.0V to provide for adequate safety and access for proposed water users.
19. Prior to Phase II bond release, additional data concerning water quality, water quantity, depth, size, configuration, postmining land use, etc., for each proposed permanent water impoundment, shall be submitted to the Regulatory Authority for permanent water impoundment approval.
20. All sediment basins will be inspected for stability, erosion, etc. two (2) times a month until removal of the structure or release of the reclamation bond.
21. The embankment and spillway will be maintained by repairing any damage such as erosion, slope failure or spillway damage until removal of the structure or release of the performance bond.
22. All ponds shall be examined quarterly for structural weakness, instability, erosion, or other hazardous conditions and maintenance performed as necessary. Formal inspections shall be made on an annual basis, including any reports or modifications, in accordance with 880-X-10C-.20[1(j)] of the Alabama Surface Mining Commission Regulations.

Applicant: Best Coal, Inc.  
Mine Name: Narley Mine  
Permit Number: P- 3850, Revision R-8

23. Sediment will be removed from each pond when the accumulated sediment reaches the sediment storage volume as shown on the detailed design sheet.
24. Upon completion of mining, successful reclamation and effluent standards being met, each sediment basin not remaining as a permanent water impoundment will be dewatered in an environmentally safe manner (such as siphoning, pumping, etc.) and reclaimed to approximate original contours by the following procedure: A permanent diversion channel (designed for a 10 year - 24 hour precipitation event) shall be cut along the outer edge of the basin to re-route drainage around the basin and back through the stabilized spillway to allow reclamation of the sediment basin. The diversion channel shall be designed and grassed as per enclosed information. (See permanent diversion for basin disposal). Upon completion of the diversion channel the back slope of the dam shall be graded to a minimum 3H to 1V slope. The dewatered sediment basin area shall be seeded with some combination of the following: Fescue, bermuda, rye grass, canary grass and willows. After seeding the area shall be mulched. Any additional sediment or embankment material not used to meet original contour, if non-toxic, shall be spread in thin layers within the permit area and vegetated as stated in the approved reclamation plan. All toxic material encountered in the basin disposal shall be buried and covered with 4 feet of non-toxic material and vegetated as stated in the approved reclamation plan.
25. A qualified registered professional engineer or other qualified professional specialist, under the direction of the professional engineer shall conduct regular inspections during construction and upon completion shall inspect each basin for certification purposes.
26. Point source discharge embankments shall be constructed and abutments keyed into desirable material if at all possible. In the event that undesirable material is encountered, addition design and construction criteria shall be submitted prior to certification.

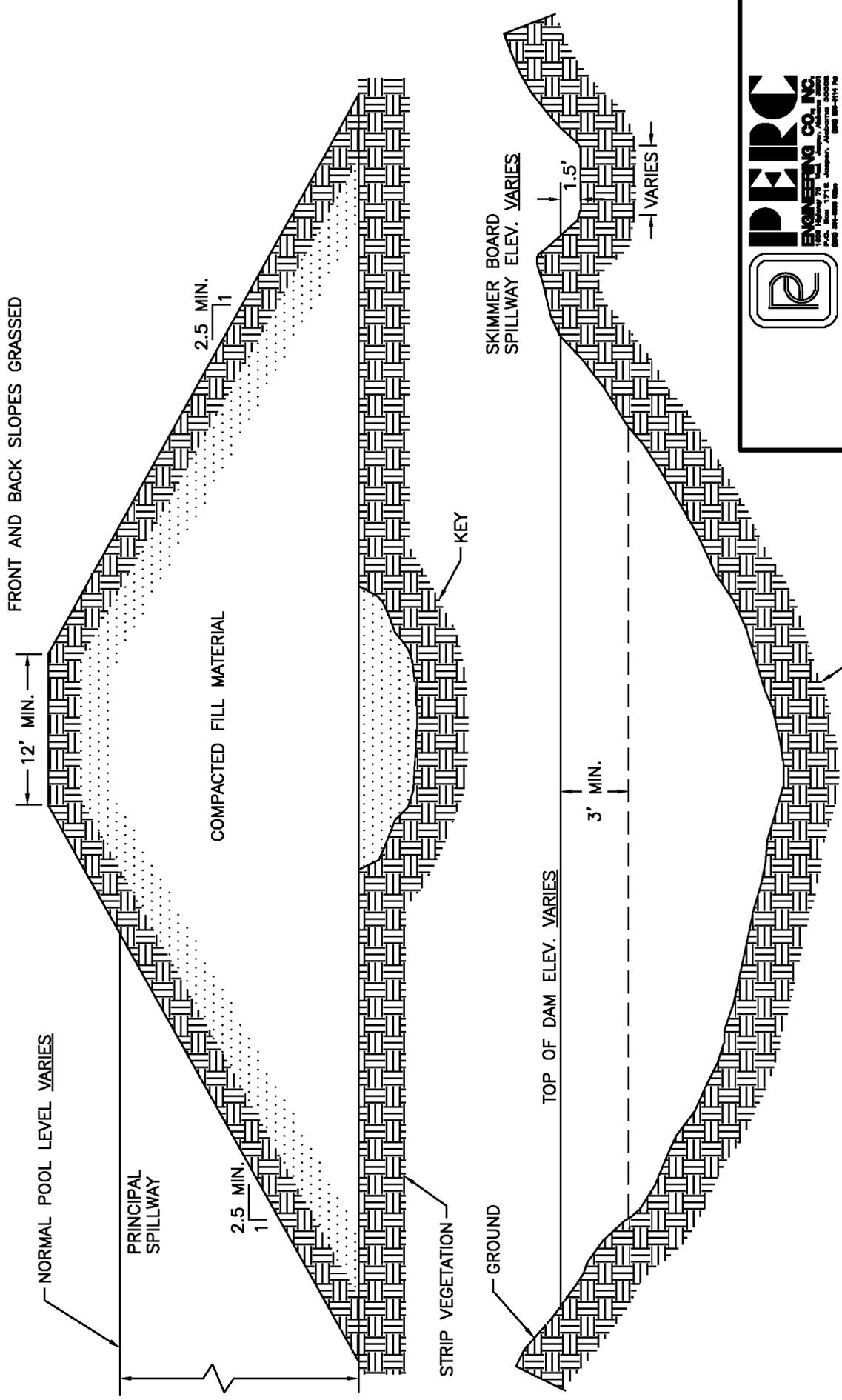


# PLANVIEW OF EMBANKMENT POND



## TYPICAL PLANVIEW OF EMBANKMENT POND

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



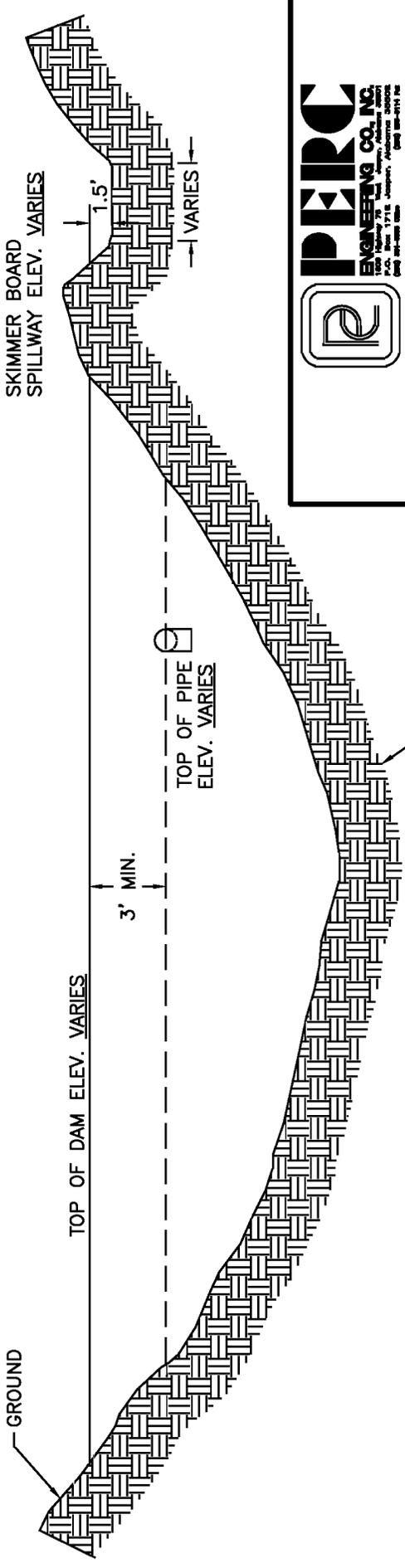
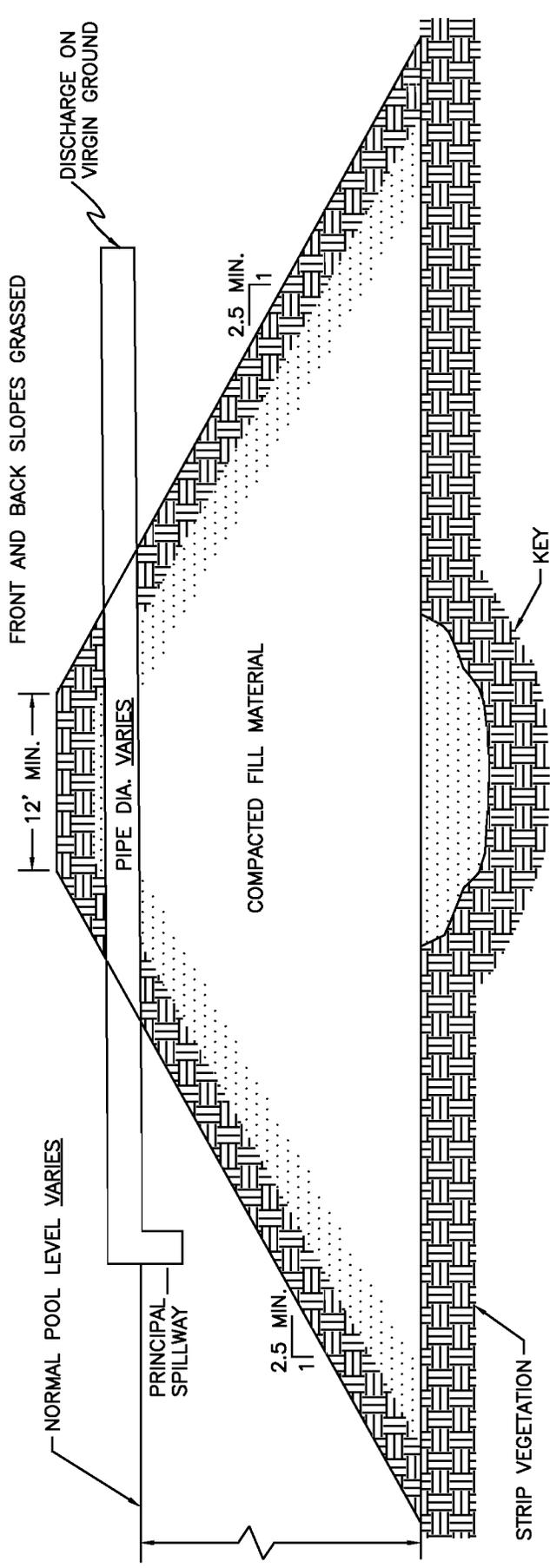
TYPICAL DAM DETAIL  
NO SCALE



TYPICAL DAM DETAIL

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

ATTACHMENT III-B-2-A

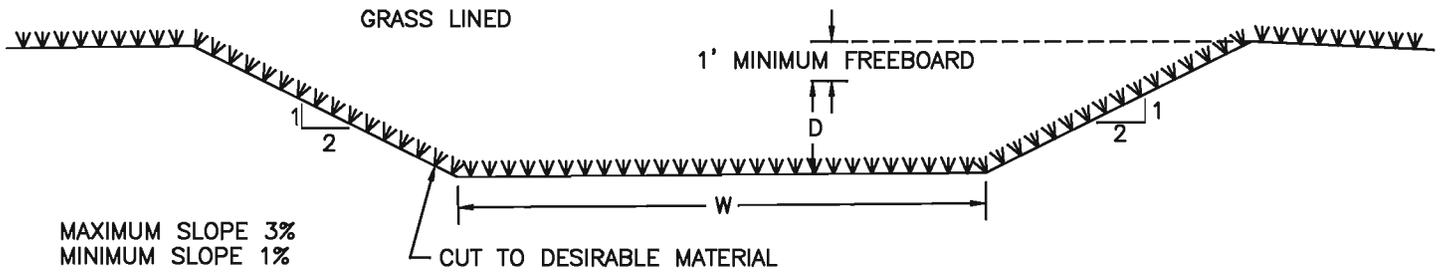


**TYPICAL DAM DETAIL**

TYPICAL DAM DETAIL  
 NO SCALE

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

ATTACHMENT III-B-2-A



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

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

\* GRASS LINING: FESCUE, BERMUDA, RYE GRASS

DIVERSION CHANNEL DEPTH (D) FOR WIDTH (W) 8.0 FT.	
PEAK FLOW Q (CFS)	DEPTH D (FT)
1-15	0.5
15-50	1.0
50-100	1.5
100-180	2.0
180-270	2.5

DIVERSION CHANNEL DEPTH (D) FOR WIDTH (W) 10.0 FT.	
PEAK FLOW Q (CFS)	DEPTH D (FT)
0-15	0.5
15-60	1.0
60-120	1.5
120-210	2.0
210-320	2.5

DIVERSION CHANNEL DEPTH (D) FOR WIDTH (W) 12.0 FT.	
PEAK FLOW Q (CFS)	DEPTH D (FT)
0-20	0.5
20-70	1.0
70-150	1.5
150-250	2.0
250-383	2.5

DIVERSION CHANNEL DEPTH (D) FOR WIDTH (W) 15.0 FT.	
PEAK FLOW Q (CFS)	DEPTH D (FT)
0-20	0.5
20-90	1.0
90-180	1.5
180-300	2.0
300-450	2.5



## TYPICAL PERMANENT DIVERSION FOR BASIN DISPOSAL

DRAWN BY: P.T.O.  
DWG. NAME: TYPICALS

DATE: 8-10-05

APPROVED BY: W.K.M.

SCALE: NONE

Applicant: Best Coal, Inc.  
Mine Name: Narley Mine  
Permit Number: P- 3850, Revision R-8

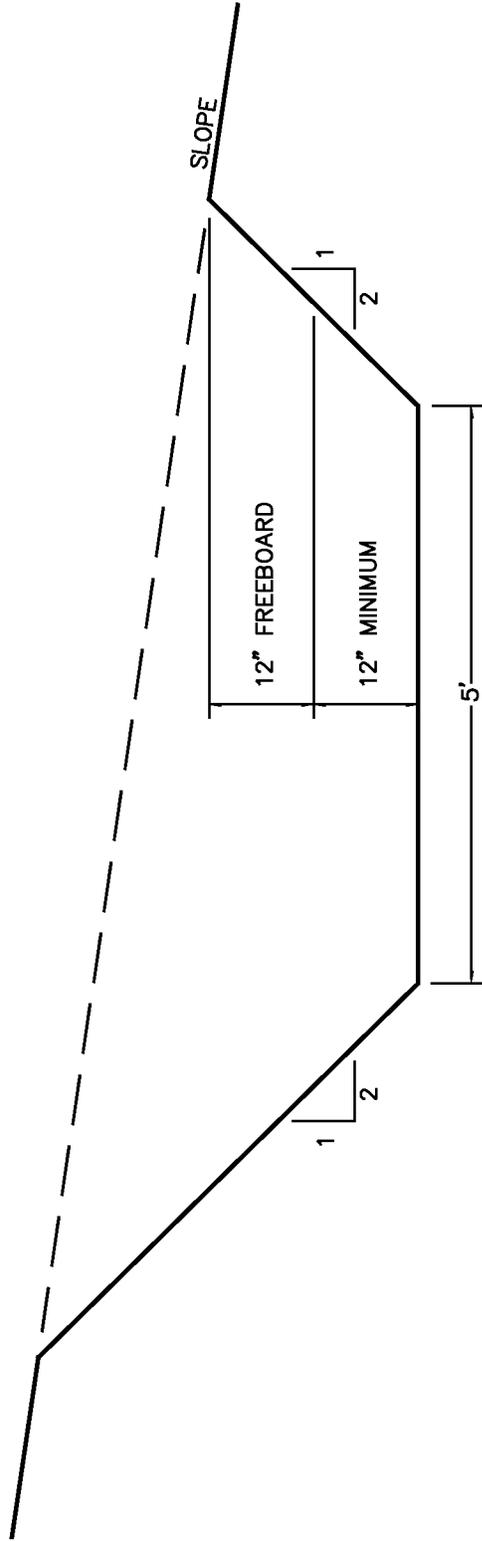
Attachment III-B-3

SPECIFICATIONS FOR DIVERSION CHANNELS  
AND DIVERSION BERMS

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

Applicant: Best Coal, Inc.  
Mine Name: Narley Mine  
Permit Number: P- 3850, Revision R-8

8. Energy dissipators shall be installed, when necessary, at discharge points where natural streams and exit velocity of the diversion ditch flow is greater than that of the receiving stream.
9. Excess excavated material not necessary for diversion channel geometry or regrading of the channel shall be disposed of in accordance with Rule 880-X-10C-.36.
10. Topsoil removed from the diversion excavations shall be handled in accordance with Rule 880-X-10C-.07 through 880-X-10C-.11.
11. Diversions shall not be constructed or operated to divert water into underground mines.
12. The embankment or berm foundation area shall be cleared of all organic matter, all surfaces sloped to no steeper than 1v:1h and the entire foundation surface scarified.
13. The entire embankment or berm shall be compacted to 95% density, based on standard proctor as outlined in ASTM.
14. The material placed in the berm shall be free of sod, roots, stones over 6 inches in diameter, and other objectionable materials. The fill material shall be placed and spread over the entire fill area, starting at the lowest point of the foundation, in layers not to exceed 12 inches in thickness. Construction of the fill shall be undertaken only at such times as the moisture content of the fill material will permit satisfactory compaction in accordance with paragraph 13.
15. The berm and all disturbed areas shall be seeded with both perennial and annual grasses in order to insure that erosion is minimized. Hay bales or riprap may be placed at the toe of the berm immediately upon completion of construction.
16. All berms shall be examined quarterly for structural weakness, instability, erosion, or other hazardous conditions and maintenance performed as necessary.



# DIVERSION DITCH

TYPICAL DIVERSION CROSS-SECTION  
NO SCALE

CHANNEL LINING TO CONSIST OF A MIXTURE OF FESCUE AND BERMUDA GRASS