

# **Expression of Interest**

Professional Mapping and Design Services at the Bond Forfeited Permit of Greendale Coals, Inc. S-75-83 Clay and Nicholas Counties, West Virginia DEP16552

CBC Quotation No. 14-016-01WV

June 19, 2014

#### Issuing Office:

West Virginia Department of Environmental Protection Office of Special Reclamation 601 57<sup>th</sup> Street SE Charleston, West Virginia 25304

#### Submitted By:

Charleston, West Virginia Office CBC Engineers & Associates, Ltd. 3729 Teays Valley Road Hurricane, West Virginia 25526 (304) 760-1009

> Primary Office 125 Westpark Road Centerville, Ohio 45459

06/19/14 12:11:25PM West Virginia Purchasing Division



June 19, 2014

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#### Gentlemen:

CBC Engineers & Associates, Ltd (CBC) appreciates the opportunity to submit our proposal in response to your Request for Expression of Interest DEP16552 to provide professional mapping and design services. These services will result in the development of mapping, engineering drawings, contract specifications, and other contract documents required for the **Bond Forfeited Permit of Greendale Coals, Inc. S-75-83** project in Clay and Nicholas Counties, West Virginia.

CBC is particularly well qualified to provide the State with the above referenced services offered at the most satisfactory terms, from both a technical and cost standpoint. The work under this contract will be performed both in our Dayton, Ohio and Charleston, West Virginia offices. CBC has provided the mining industry with quality engineering services since 1995, and based on CBC's experience and knowledge of the current regulatory laws, regulations, procedures, interpretations and requirements, our firm is well suited to perform all referenced services.

CBC welcomes you to visit our facility located at 3729 Teays Valley Road, Hurricane, WV 25526.

#### CBC has:

- On staff three (3) West Virginia registered civil and mining engineers who will review, stamp, and sign all work and contract documents.
- Available staff of geotechnical, civil and mining engineers, CADD operators, surveyors, and biologists with extensive expertise in reclamation engineering, hydrology, and geology: and
- Extensive experience in surface and underground coal mining, environmental, ecological principals, stream restoration and mitigation, and contract administration.

We look forward to building a strong relationship with the WVDEP-OSR.

Sincerely,

CBC Engineers & Associates, Ltd.

Mitchell T Hardert PF

Chief Engineer and Vice President



NENDOR

State of West Virginia Department of Administration Purchasing Division 2019 Washington Street East Post Office Box 50130 Charleston, WV 25305-0130

RFQ COPY TYPE NAME/ADDRESS HERE

#### Solicitation

NUMBER DEP16552 PAGE 1

ADDRESS CORRESPONDENCE TO ATTENTION OF

ADDRESS CHANGES TO BE NOTED ABOVE

FRANK WHITTAKER 304-558-2316

ENVIRONMENTAL PROTECTION
DEPT. OF
OFFICE OF SPECIAL RECLAMATION
601 57TH STREET SE
CHARLESTON, WV
25304 304-926-0499

DATE PRINTED 05/15/2014 **BID OPENING DATE:** 06/19/2014 BID OPENING TIME 1:30PM LINE QUANTITY CAT. UOP ITEM NUMBER UNIT PRICE AMOUNT 0001 JB 906-29 1 PERMIT DESIGN EXPRESSION OF INTEREST THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, IS SOLICITING EXPRESSIONS OF INTEREST FOR PROFESSIONAL MAPPING AND DESIGN SERVICES AT THE BOND FORFEITED PERMIT OF GREENDALE COALS INC, S-75-83 IN dlay and nicholas counties in wv. HER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS. THIS IS THE END OF REO DEP16552 \*\*\*\*\* TOTAL: SIGNATURE 1937-428-6150

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Clay and Nicholas Counties, West Virginia

DEP16552

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#### 1.0 Introduction

CBC Engineers & Associates, Ltd. (CBC) proposes to provide professional mapping and design services to the West Virginia Department of Environmental Protection, Office of Special Reclamation (WVDEP-OSR). These services will result in the development of mapping, engineering drawings, contract specifications, and other contract documents as may be required for the Bond Forfeited Permit of Greendale Coals, Inc. S-75-83 project in Clay and Nicholas Counties, West Virginia. Prepared construction documents will consist of:

- Prepare work areas by clearing and grubbing.
- Install new and refurbish existing drainage controls and erosion protection (sediment ponds, sediment ditches, and diversions).
- Locate, protect and/or avoid existing utility lines, poles, gas lines, etc. Also, coordinate with utility companies for locating and relocating existing facilities and/or providing for new utility services.
- Construct new and upgrade existing access roads, and install culverts.
- Install mine seals, and subsurface drains.
- Preform blasting designs and pre-blast surveys, if needed for reclamation of site.
- Eliminate existing highwalls by backfilling and regarding with materials available onsite, or designated borrow area sites nearby.
- Install surface water ditches where appropriate to control runoff.
- Repair or eliminate any slip areas on partially backfilled highwalls.
- Regrade/remove sediment ditches when not needed.
- Reshape, and add lime amendments to any potentially toxic coal refuse piles.
- Condition, stabilize, and revegetate disturbed land by the plan view acre, based on post-mine land use from permit files and landowners.
- If long term water treatment is anticipated on the site, prepare and regrade areas to accommodate space for structures or facilities.
- Design efficient passive and active water treatment and pumping systems which minimize maintenance and meet NPDES water quality standards.
- Design appropriate sludge handling facilities on site.
- Final site cleanup.

CBC is extremely well qualified to provide the State with the above referenced services. CBC has Three (3) West Virginia registered Professional Engineers, Three (3) professional Surveyors, and a team of geologists, environmental scientists, biologists, technicians, CADD operators, word processor operators, secretaries, and draftspersons. CBC has served the West Virginia Mining Industry for over 19 years. These projects include:

- Subsidence evaluations, breakthrough analysis and Pillar design & stability,
- Coal refuse pile reclamation and design, including impoundment structures.



- · Stream design, restoration, and mitigation,
- · Acid mine drainage (AMD) evaluation and treatment,
- Mine portal reclamation,
- Wetlands replacement and development,
- Environmental liability assessments,
- Hydrologic/hydraulic design of erosion and sediment control structures,
- Soil analysis and re-vegetation plans,
- Construction monitoring services, surveying and inspection,
- Design of excess overburden disposal fills,
- Detailed reclamation plans,
- Detailed subsurface/geotechnical investigations for foundation, subsidence, and slope stability,
- Mine closure plans/post-reclamation land use,
- Permitting for deep and surface mine applications (NPDES, Nationwide Permits, U.S Army Corps of Engineers Section 404 permits, etc.),
- Probable hydrologic consequences (PHC) statement preparation,
- Phase I & II Environmental Site Assessments, and
- Assessment of contamination (e.g. PCB"s, asbestos, lead)

Any sub-consultants to be utilized on this project are listed in the sub-consultant section of the Consultant Qualification Questionnaire, and are determined by scope of project. CBC will provide the required expertise to complete reclamation projects in a timely, economical, and efficient manner.

## 2.0 Corporate History and Experience

CBC Engineers & Associates, Ltd. is a multi-disciplinary geotechnical, civil, environmental, and mining engineering firm headquartered in Dayton, Ohio, with offices in Charleston, West Virginia; Lexington and Hazard, Kentucky; and Harrisburg, Illinois. Established in 1995, CBC employs over 45 engineers, scientists, and support personnel. Our eight (8) registered professional engineers have over 250 years of combined experience, offering a wide range of interdisciplinary skills, and are supported by a large group of experienced engineers, designers, surveyors, and technicians. Our firm has a diversified practice covering engineering (civil, mining, geotechnical, and environmental), permitting, site characterization and remediation, and general environmental consulting.

Our clients include state, local and federal government agencies, mining companies, manufactures, utility companies, commercial, residential, industrial and institutional clients, as well as local and national chain land developers.

CBC maintains company owned drill rigs and laboratory testing facilities in many principle locations that can provide all necessary geotechnical assessments and foundation support, along with in-house surveying and construction management services.



CBC has completed several projects similar to a WVDEP OSR type project. These include construction management and observation, design and permitting of refuse piles and slurry impoundments, evaluating mine drainage, reclamation design and monitoring, landslides, stream monitoring, grading plans, watershed assessments, wetland studies, and detention pond design.

From the analysis stage to project implementation, the professional staff of CBC provides clients with cost-effective engineering and planning solutions for their environmental problems. CBC's outstanding reputation is based upon dedicated service to clients and demonstrated technical abilities.

CBC proposes to utilize primarily our staff in the Charleston, and Dayton offices, with technical support and surveying by our Hazard and Lexington offices as required.

#### 2.1 Design Engineering and Contract Document Preparation

CBC has extensive experience in design engineering and the preparation of documents for reclamation and related projects. CBC takes pride in in staying creative and finding innovative approaches to difficult problems. Our 19 years of experience in the mining and related industries will ensure quality engineering for this and all future OSR projects.

All five of our Offices are involved in the coal and mining industries and have developed many professional relationships with state and federal agencies including MSHA, Corps of Engineers, and multi-state regulatory agencies. CBC is vastly familiar with WVDEP's guidelines for preparing drawings, technical specifications, and supporting documents.

During the design engineering phase of our projects, CBC evaluates alternative analysis and works closely with WVDEP and all regulatory agencies involved to review options and select the most practicable plan. CBC engineers and technical staff work together to review all aspects of each construction package to ensure the most feasible and economically sounds methods are applied.

### 2.2 Surveying and Mapping

Surveying will be performed by CBC's in-house surveyors to provide the most cost efficient and timely services. CBC has **three (3)** licensed professional surveyors with over 75 years of combined surveying experience. Our surveyors are experienced in all aspects of surveying such as topographic mapping, boundary and property surveys, and construction surveys for layout of work, record drawings, quantity measurements, and environmental sampling and monitoring.

CBC's survey crew utilizes state-of-the-art "Field to Finish" equipment and software such as, Total Stations and GPS surveying equipment, Autocad 2014 software, and a Hewlett Packard Designjet 1050c Plus. Technicians use this information to generate plan views, profiles, cross sections and other engineering drawings.

All surveys conducted by CBC are completed under the supervision of a licensed land surveyor and will be performed under the general direction of a West Virginia registered professional engineer, the CBC



project engineer and the project manager. All surveys and mapping are completed to the standards as outlined by the National Map Standards, as well as other applicable quality standards to include OSR specifications.

Additional information on CBC's corporate history and experience is included in the Consultant Confidential Qualification Questionnaire included in **APPENDIX E**.

Blasting design within 1000 feet of a protected structure, pre-blast surveys and realty appraisal work, if needed for reclamation of the site(s) will be performed by a sub-contractor.

#### 2.3 Subsurface Investigation

CBC maintains company-owned drill rigs and a laboratory testing facility that can provide all aspects of geotechnical engineering investigations. Each geotechnical report contains written recommendations and construction procedures to obtain desired results. CBC's engineers are experienced in making sound judgments and advising owners on the structural and economic feasibility of any given project; starting with the evaluation of subsurface conditions, and ending with the determination of the physical and engineering characteristics of the soil/rock, and their probable behavior under stress.

In some situations it is not economically feasible to move our drilling fleet to a project location, so CBC has developed relationships with several drilling firms in order to ensure the most cost efficient options are employed. Should timing and cost dictate, CBC may choose to sub-contract drilling work out as necessary, under the supervision of the principle-in-charge and project manager.

## 2.4 Laboratory Services

CBC operates full-service soils and materials laboratories in several offices.

CBC offers a wide range of special inspection and materials testing services; performed by our certified field staff using the most modern and up-to-date testing equipment and procedures. Our testing facilities have the capability to analyze natural materials such as soil and rock, and manufactured materials such as concrete and steel. The soils analysis capabilities include classification and compaction, proctor, and specific gravity. CBC also maintains several nuclear densometer testing gauges to monitor field compaction.

Coal refuse and water analysis, if needed for reclamation of the site(s) will be performed by a sub-contractor.

# 3.0 Qualifications of Personnel

CBC is a privately owned company that is dedicated to staying lean, innovative, and current on engineering practices, technologies and regulations. CBC strives to deliver high quality, cost effective engineering solutions and services on schedule and on budget by supporting the motivated, flexible, and



focused teams of experienced employees. CBC values the importance of client relationships and will strive to continue to offer the best client-consultant experience in the business.

Mr. Mitchell T. Hardert, P.E. will serve as the principle-in-charge. Mr. Hardert is registered is 48 U.S. states, and the District of Columbia. He has **eighteen (18)** years of experience in refuse, impoundment, and dam design; geotechnical investigations; foundation engineering; stability analysis; buried structure design; and remediation. Mr. Hardert has a good working relationship with federal, state, and local regulatory agencies.

Roger W. Cornett, P.E, PLS will serve as a project engineer. Mr. Cornett has over **thirty-five (35)** years of experience in surface and underground coal mining design and permitting, environmental impact statements, mine feasibility and planning, and acting as liaison between coal companies and state and federal regulatory agencies.

Eugene D. Highlander, P.E. will serve as a project engineer. Mr. Highlander has over **forty-six (46)** years of experience in the coal mining industry and has worked on multiple projects involving the reclamation of acid-producing refuse piles.

John Corda, P.E will serve as a project geotechnical engineer. Mr. Corda has over **forty-eight (48)** years of experience and has participated in the design of nearly 400 projects for dams, foundations, and coal impoundments. He has extensive experience in slope stability analysis, liquefaction, internal and surface drainage calculations, seepage and dams break analysis, as well as reclamation of strip mine areas. Mr. Corda has authored or co-authored 25 paper and 40 professional reports in the geotechnical and civil engineering fields.

Deepa Nair, P.E. will serve as a project geotechnical engineer. Ms. Nair has over **seven (7)** years of experience. She will serve as the primary internal consultant for geotechnical investigations. Ms. Nair will be involved in stability analysis, soils classifications, and boring log analysis.

Tony Bowling, P.E., PLS will serve as a project surveyor. Mr. Bowling has over **thirty (30)** years of surveying experience. He has managed surveying and engineering activities for The Kentucky Transportation Cabinet for over twenty (20) years and has lead CBC's surveying activities in our Hazard office for nearly ten (10) years. Mr. Bowling is responsible for the management of all worked performed by our Hazard office and ensures that any required surveying is performed correctly and on time.

Gerald L. DeNeal will serve as a project engineer. Mr. DeNeal has over **thirty-four (34)** years of direct coal mine land reclamation and project management experience. Mr. DeNeal has done extensive coal mine reclamation planning and budgeting for surface strip operations (dragline/shovel), two seam truck carry-back operations, large truck/shovel carry-back operations and all sizes of underground coal operations, including longwall subsidence reclamation. In his career, Mr. DeNeal has demonstrated highly successful coal mine reclamation innovation and special techniques that improved vegetative productivity on "pre-law" abandoned mine lands.



Michael L Cross will serve as a project manager. Mr. Cross has over **thirty-two (32)** years of experience in the mining industry, including mine design and reclamation, reclamation inspection, reclamation liabilities studies, seepage studies, and implemented water treatment facilities for acid mine drainage. Mr. Cross has vast experience with US Army Corps of Engineers permitting and has overseen and monitored stream restoration and creation projects.

Chad Reed will serve as a project manager and has over **fifteen (15)** years' experience in the mining industry. He is involved in overseeing CBC's impoundment inspection and certification department, all aspects of permitting, design, evaluation, and geological modeling. Mr. Reed is experienced with state and federal regulations in WV, KY and OH.

S. Mark Summers, PLS and Bill Robertson will serve as Technical Specialists. Mr. Summers is a senior project manager with an extensive background in reclamation inspection and has over **thirty-seven (37)** years of experience in the mining industry. Mr. Robertson is our Director of Field Services who coordinates all construction observation and geotechnical drilling services.

Edward. G. Galaska, Erika Dunham, and Meredith Coll-Atkins will serve as environmental scientists. Mr. Galaska supervises our Environmental department and has over **twenty-seven (27)** years of experience in the environmental and biological fields. Mr. Galaska brings experience across many sectors including Mining, Airports, Hospitals, Schools and Commercial Real Estate and will oversee the activities of Ms. Dunham and Ms. Coll-Adkins on this project.

Ms. Dunham has over **seventeen (17)** years in Phase I & II Environmental Site Assessments, Asbestos Inspections, and Environmental Audits. Ms. Dunham coordinates all field activities, inspections, testing and reporting on all work performed by CBC. Ms. Dunham will coordinate and execute any related field activities on this project.

Ms. Coll-Atkins is the lead environmental scientist in our Charleston, WV office with twelve (12) experience. Meredith's duties and responsibilities have included preparation of all WVDEP permitting, Environmental Mitigation Strategies, U.S. Fish and Wildlife Protection and Enhancement Plans, phase release applications, planting plans, selenium treatment, water and soils analysis, drainage design, and stream delineation. She has experience in managing surface mine and deep mine permitting and reclamation projects and has coordinated pre-submittal and reclamation inspections with West Virginia Department of Environmental Protection (DEP). She is well respected among the staff of WVDEP Charleston, Oak Hill and Logan offices.

All of CBC's engineers have direct experience with mine reclamation, grading/drainage, feasibility studies, water study and design, stream restoration, and preparation of construction documents.

CBC's project managers will be supported by a team of staff engineers, geologists, environmental scientists, biologists, technicians, CADD operators, word processor operators, secretaries, and draftspersons, who will provide the expertise and manpower to complete the project.



#### 4.0 Management Plan

CBC's proposed management organization is presented in Figure 1 (Appendix G). The work will be performed by CBC's Dayton, Ohio and Charleston, West Virginia offices, which will allow ready access to the project area. Our Charleston office is convenient with respect to the WVDEP Charleston office. Assistance, if and when needed, will be provided by staff located in the Kentucky offices.

CBC's professional, technical and support staff have extensive experience on OSR related projects and are extremely well qualified to serve the WVDEP on this contract. CBC is ready to commit the personnel and resources required to complete the project in a timely, technically sound and cost efficient manner.

Project Management will be provided by Mr. Mitchell T. Hardert, P.E. or Michael L. Cross as shown in Figure 1. Mr. Hardert will be the principle-in-charge, responsible for contract management and overall performance of the project. He will review the proposed project, assign a project manager, assemble a project team and appoint key staff to develop a proposed scope of work. The principle-in-charge and the project manager will visit the site with the WVDEP-OSR to review site conditions and the proposed services to be completed and guide the preparation of a detailed proposal and cost estimate. The detailed scope of work along with cost estimate and man hours will then be submitted to the WVDEP-OSR for review. Upon WVDEP-OSR approval of the proposal, the project manager will arrange for start of project activities. The principle-in-charge will review the project budget and schedule during performance of the project and will provide a final QA/QC review of the documents prior to submittal to the WVDEP-OSR. The Project Manager will generally supervise the work in progress and review work products at intermediate points and finally prior to submittal to the WVDEP, and will be responsible for maintaining liaison with the WVDEP Project Manager including project status report, as required.

Day-to-day project activities will be performed under the direction of the Project Manager by one of the Project Engineers or Project Technicians (Michael L. Cross, Deepa Nair, M.S., P.E., I. John Corda, M.S., P.E., Roger Cornett, P.E., PLS, Chad Reed, Tony Bowling, P.E., PLS, S. Mark Summers, PLS and Bill Robertson) as shown in **Figure 1 (Appendix G).** Their main activities will include development of detailed step-by-step project work plans to ensure the project activities are completed on-budget and on-time, review the work products at intermediate points and at project completion, providing guidance and direction to project staff, as well as engineering and design work.

Mr. Edward G. Galaska will oversee all environmental services performed by CBC. Field and technical analysis will be performed by Ms. Meredith Coll-Atkins and Ms. Erika Dunham. Surveys, reports, and documents will be reviewed by Mr. Galaska for QA/QC prior to submittal.

CBC's experienced staff in multiple locations allows for quick response time, provides flexibility, and permits for quality input from in-house experts. CBC's project management plan is to build small teams of highly qualified personnel, which ensures clients budget conscious, quality work.

WVDEP-OSR has indicated that 60 days are required for submittal of deliverables for the Professional Mapping and Design Services at the Greendale Coals, Inc. S-75-83 Project. CBC stands ready to meet your timeframe.



#### 4.1 Project Budget Control

The project manager will be responsible for monitoring the project budget and keeping the principle-incharge informed of its status. CBC's staff submits time sheets on a weekly basis. All charges including labor hours and other project expenses are compiled and reported to the project manager by Tuesday of the following week. A detailed description of project expenses is available upon request.

#### 4.2 Schedule Control

Direct responsibility for the schedule control lies with the project manager. Initially, the Project Manager will review the work directive schedule requirements (understood to be 60 days for submittal for preliminary design documents) to see how they can be achieved with the anticipated scope of work. As the project progresses, the Project Manager will monitor progress and compare it with the established schedule on a weekly basis, keeping the principle-in-charge aware of the schedule's status. In this manner, the principle-in-charge can make staff adjustments to maintain the project schedule. If circumstances develop that make it impossible to maintain the project schedule, the Project Manager will contact the WVDEP Project Manager to develop mutually acceptable adjustment to the schedule.

## 4.3 Quality Assurance/ Quality Control

Submittals to the WVDEP-OSR will be reviewed and commented on by the project manager and principle-in-charge prior to submittal to the WVDEP-OSR. CBC uses standard Quality Assurance/ Quality Control (QA/QC)

# 5. 0 Closing

We look forward to serving WVDEP-OSR on the Greendale Coals, Inc. S-75-83 Project and bringing it to completion. Our commitment is to provide quality, cost effective and timely service, as well as exceed your expectations. We believe our track record of our professionals demonstrates our ability and commitment.



Appendix A



### CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 11/5/2013

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES 3ELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

	IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).									
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8.	BC Engineers & Associates Ltd; Cow Carlson Engineers & Associates, Ltd	vnero	ı, Ba	nner		er c :Standar				19070
lõ	owherd Engineers	4.,			INSUR	ERD:Hudson	Specialty In	nsurance Co.		25054
38	860 Teays Valley Rd.				INSUR	ERE:				
	urricane WV 25526				INSUR	ERF:				
	OVERAGES CE	RTIF	CAT	E NUMBER: 1447940095	<u> </u>			REVISION NUMBER:		
	THIS IS TO CERTIFY THAT THE POLICIE: INDICATED. NOTWITHSTANDING ANY R CERTIFICATE MAY BE ISSUED OR MAY EXCLUSIONS AND CONDITIONS OF SUCH	EQUI PER I POL	REME TAIN.	ENT, TERM OR CONDITION THE INSURANCE AFFORDI LIMITS SHOWN MAY HAVE	OF AN ED BY	Y CONTRACT THE POLICIE REDUCED BY	OR OTHER S DESCRIBE PAID CLAIMS	DOCUMENT WITH RESPE	CT TO	MUICH THIS
INS		INSF	WVD	POLICY NUMBER		POLICY EFF (MM/DD/YYYY)	(MM/DD/YYYY)	LIMIT	rs	100000000000000000000000000000000000000
Α	GENERAL LIABILITY	Y	Y	6806108L13513			11/15/2014	EACH OCCURRENCE	\$1,000,	000
	X COMMERCIAL GENERAL LIABILITY							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$1,000,	000
	CLAIMS-MADE X OCCUR							MED EXP (Any one person)	\$10,000	)
	X Al Primary &							PERSONAL & ADV INJURY	\$1,000,	
	X Non-Contributory							GENERAL AGGREGATE	\$2,000,	
ļ	GEN'L AGGREGATE LIMIT APPLIES PER:							PRODUCTS - COMP/OP AGG	\$2,000,0	
	POLICY X PRO- X LOC							TRODUCTO - COMITOT ACC	\$	500
-	AUTOMOBILE LIABILITY	Y	Y	BA6080L18313		11/15/2013	11/15/2014	COMBINED SINGLE LIMIT (Ea accident)	\$1,000,0	300
ĺ	X ANY AUTO							BODILY INJURY (Per person)	\$1,000,0	300
	ALL OWNED SCHEDULED AUTOS						ř	BODILY INJURY (Per accident)	\$	
	ALL OWNED SCHEDULED AUTOS  X HIRED AUTOS X NON-OWNED AUTOS							PROPERTY DAMAGE (Per accident)	S	
	X Al Primary							(Per accident)	S	
В	X UMBRELLA LIAB X OCCUR	Y	Y	CUP7686Y30913		11/15/2013	11/15/2014			
	EXCESS LIAB CLAIMS-MADE		[ ]	, 4. (3.4.)			11110/2014	EACH OCCURRENCE	\$2,000,0	
	DED X RETENTION \$10,000				- 1			AGGREGATE	\$2,000,0	100
Ċ	WORKERS COMPENSATION		Y	UB1825T57913		11/15/2013	1/15/2014	Excludes Professional X WC STATU- OTH-	\$	,
0	AND EMPLOYERS' LIABILITY			001023137913	1	11/15/2013	1715/2014	X WC STATU- TORY LIMITS ER		
	ANY PROPRIETOR/PARTNER/EXECUTIVE NOFICER/MEMBER EXCLUDED? (Mandatory in NH)	N/A			- 1			E.L. EACH ACCIDENT	\$1,000,0	00
	(Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below							E.L. DISEASE - EA EMPLOYEE	\$1,000,0	00
	DÉSCRIPTION OF OPERATIONS below			· · · · · · · · · · · · · · · · · · ·		2 3		E.L. DISEASE - POLICY LIMIT	\$1,000,0	00
	Professional Liability Claims Made Retro Date: 9/15/1995	N		AEE7269502			1	Aggregate	\$3,000,00 \$3,000,00 _iab, Incl	00
Add	CRIPTION OF OPERATIONS / LOCATIONS / VEHICL litional Insured and Waiver of Subrog eement.	es (A	Attach A	CORD 101, Additional Remarks So designated above is pro	chedule, vided	If more space is when requir	required) ed of the Na	amed Insured by writter	n contra	act or
				<del>-</del>						
CE	RTIFICATE HOLDER			(	CANC	ELLATION				
	Specimen-WV For Purposes of Evidencing Coverage Only WV 25526	ı			THE	EXPIRATION	DATE THE	SCRIBED POLICIES BE CA REOF, NOTICE WILL B PROVISIONS.	NCELLE E DELI	D BEFORE VERED IN
	Coverage Only VVV 25526			TA.	AUTHORIZED REPRESENTATIVE					

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# **Bureau of Workers'** Compensation

30 W. Spring St. Columbus, OH 43215

# **Certificate of Premium Payment**

This certifies the employer listed below has paid into the Ohio State Insurance Fund as required by law. Therefore, the employer is entitled to the rights and benefits of the fund for the period specified. For more information, call 1-800-OHIOBWC.

This certificate must be conspicuously posted.

Policy No. and Employer

Period Specified Below

1172826

01/01/2014 Thru 08/31/2014

COWHERD ENGINEERS & ASSOCIATES LTD CBC ENGINEERS & ASSOCIATES LTD. 125 WESTPARK RD CENTERVILLE, ON 45459-4814

ohiobwc.com

Stephen Buchen

You can reproduce this certificate as needed.

# Ohio Bureau of Workers' Compensation

## Required Posting

Effective Oct. 13, 2004, Section 4123.54 of the Ohio Revised Code requires notice of rebuttable presumption. Rebuttable presumption means an employee may dispute or prove untrue the presumption (or belief) that alcohol or a controlled substance not prescribed by the employee's physician is the proximate cause (main reason) of the work-related injury.

The burden of proof is on the employee to prove the presence of alcohol or a controlled substance was not the proximate cause of the work-related injury. An employee who tests positive or refuses to submit to chemical testing may be disqualified for compensation and benefits under the Workers' Compensation Act.

Ohio

**Bureau of Workers'** Compensation

You must post this language with the certificate of premium payment.

DP-29 BWC-1629 7/7/08

Appendix B

RFQ No.	DEP16552

#### STATE OF WEST VIRGINIA Purchasing Division

# **PURCHASING AFFIDAVIT**

MANDATE: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

**EXCEPTION:** The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

#### **DEFINITIONS:**

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (*W. Va. Code* §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:	
Vendor's Name: CBC EngiNEERS	S & ASSOCIATES LAD
Authorized Signature:	Date: 6-10-2014
State of Ohio	
County of Montgoney, to-wit:	
Taken, subscribed, and sworn to before me this 10 da	y of Jone , 20 14.
My Commission expires September	
AFFIX SEAL HERE	NOTARY PUBLIC on E
	Purchasing Affidavit (Revised 07/01/2012)

LAURA E. BARKSDALE, Notary Public In and for the State of Ohio My Commission Expires Sept. 2, 2015 **Appendix C** 

# **CERTIFICATION AND SIGNATURE PAGE**

By signing below, I certify that I have reviewed this Solicitation in its entirety, understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid or proposal for review and consideration; that I am authorized by the bidder to execute this bid or any documents related thereto on bidder's behalf; that I am authorized to bind the bidder in a contractual relationship; and that to the best of myknowledge, the bidder has properly registered with any State agency that may require registration.

CBC ENGINEERS & ASSOCIATES, Ltd.
(Company)
Mitchell Allet
(Authorized Signature)
MITCHEI T. HARDERT - CHIEF ENGINEER & U.P. (Representative Name, Title)
937-428-6150 937-428-6154
(Phone Number) (Fax Number)
6-10-2014
(Date)

Appendix D

# ADDENDUM ACKNOWLEDGEMENT FORM SOLICITATION NO.: DEP16552

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum (Check the be	Numbers Received: ox next to each addendum rece	ived)	
	Addendum No. 1		Addendum No. 6
	Addendum No. 2		Addendum No. 7
	Addendum No. 3		Addendum No. 8
	Addendum No. 4	A	ddendum No. 9
	Addendum No. 5	A	ddendum No. 10
discussion hel	d between Vendor's representate	tion made of	da may be cause for rejection of this bid. I or assumed to be made during any oral any state personnel is not binding. Only the tions by an official addendum is binding.
		CBC (	Company  Authorized Signature
	-	6	Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

**Appendix E** 

W			T ENVIRONMENT		CTION Attachment 'B''	
PROJECT NAME Bond Forfeited Permit of Green Coals, Inc. S-75-83		DATE (DAY, MONTE 06-19-2014		FEIN 31-144		
1. FIRM NAME CBC Engineers & Associates, Lt	2. HOME OFFICE BUSINESS ADDRESS 125 Westpark Road, Centerville, Ohio 45459			3. FORMER FIRM NAME N/A		
4. HOME OFFICE TELEPHONE 5. ESTABL (937)428-6150 1995		LISHED (YEAR) 6. TYPE OWNERSHIP  Partnership			6a. WV REGISTERED DBE (Disadvantaged Business Enterprise)	
	lle, Ohio 4	45459/ 937-428-61	L50/ Mitchell Harder	t/ 6 Daytor 3 Hazard	RSONNEL EACH OFFICE  1, 4 Charleston, 4 Lexington  1, 3 Harrisburg	
8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM Al Banner, President & COO Mitchell Hardert, Chief Engineer & Vice President  8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS Joe Dennis, Director (937)428-6150  Edward Galaska, Director (937)428-6150						
ARCHITECTS BIOLOGIST CADD OPERATORS CHEMICAL ENGINEERS CIVIL ENGINEERS		ISTS ICAL ENGINEERS NMENTALISTS FORS FISTS IANS	<ul> <li>LANDSCAPE ARG</li> <li>MECHANICAL EI</li> <li>MINING ENGI</li> <li>PHOTOGRAMMETI</li> <li>PLANNERS: URI</li> <li>SANITARY ENGI</li> <li>SOILS ENGINEI</li> <li>SPECIFICATION</li> <li>WRITERS</li> </ul>	NGINEERS NEERS RISTS BAN/REGIONA INEERS ERS	STRUCTURAL ENGINEERS SURVEYORS TRAFFIC ENGINEERS OTHER  46 TOTAL PERSONNELL	
TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: *RPEs other than Civil and Mining must provide supporting documentation that qualifies them to supervise and perform this type of work.						
	240					
10. HAS THIS JOINT-VENTURE WOR	RED TOGETH	HER BEFORE?	YES 🗱 NO			

11 OIL DE KEY CONSULTANTS/SUB	-CONSULTANTS ANTICIPATED TO L USED. Attack	"AMI Congultant Qualification
Questionnaire".		AML Consultant Qualification
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE
Horn & Associates	a 11 72 1111	
216 N. Main Street Winchester, KY 40391	Soil Drilling	XYes
		No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE
F Moore Drilling Service, Inc. 10585 Flagg Springs Pike	Call Duilling	
California, KY 41007	Soil Drilling	XYes
		No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE
Central Star Drilling 288 Heron Road	Soil Drilling	X Yes
Peebles, Ohio 45660	Son Diming	
NAME AND ADDRESS	ann av i v av	No
NAME AND ADDRESS: Bowser Morner, Inc.	SPECIALTY:	WORKED WITH BEFORE
4518 Taylorsville Road	Soil/Refuse Testing	X Yes
Dayton, Ohio 45424		9-3-2 0 E
NAME AND ADDRESS:	SPECIALTY:	No WORKED WITH BEFORE
REI Consultants, Inc.	Si Belial I.	WORKED WITH BEFORE
PO Box 286	Soil Testing/ABA	X Yes
Beaver, WV 25813		No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE
Smith Adjusting, Inc.		
2931 Hultz Road Catlettsburg, Ky 41129	Blasting Design/Survey	Yes
Cattettsburg, Ry 41129		X No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE
Photo Science, Inc. 523 Wellington Way	Aerial Mapping	Yes
Lexington, Kentucky 40503		165
		XNo

12. A. Is your firm experienced in Special Reclamation remediation/ Mine reclamation Engineering?

YES Description and number of projects:

CBC personnel while working directly in the coal industry have experience in all phases of mine reclamation/engineering of over 25 permits/projects in WV including single and multiple seam contour surface mines, mountain top removal surface mines, deep mines, refuse areas, prep plants and loadouts. Numerous other surface mines and deep mines in Kentucky were reclaimed to achieve final bond release.

B. Is your firm experienced in soil analysis and coal refuse analyses?

YES Description and number of projects:

CBC performs a geotechnical investigation for the refuse areas that it designs and permits. Soil analyses are part of investigation. Soil analysis are required for most surface and deep mine SMA's. CBC completes most soil investigations in-house but has used some sub-contractors depending on the type of soil analysis required.

C. Is your firm experienced in hydrology and hydraulics for handling mine water discharges on mining sites?

YES Description and number of projects:

WVDEP SMA's, NPDES applications and MSHA refuse areas designed and permitted by CBC contain detailed Storm Water Run-off Analysis (SWROA's), sediment control structures designs, conveyance channels designs and road designs including bridge, culverts, ditch designs. CBC has also prepared SMA's, NPDES applications and MSHA in Kentucky, and Illinois for the handling of mine water discharges on mining sites. Projects designed by CBC exceed 100+.

D. Does your firm produce its own aerial photography and development of contour mapping?

NO Description and number of projects:

CBC has developed contour mapping based on field survey work related to coal refuse work. CBC does not own its own Aerial Photography service.

E. Is your firm experienced in design of highwall elimination, grading and material handling plans for land reclamation?

YES Description and Number of Projects:

CBC personnel while working directly in the coal industry have experience in highwall elimination, grading and material handling of over 25 permits/projects. Highwalls eliminated ranged in height from 70 feet to 300 feet with reclaimed slopes as steep as 1.33H:1V. Grading and materials handling conducted as part of final reclamation or contemporaneous reclamation plans of active permits.

13. PL JONAL HISTORY STATEMENT OF PR data but keep to essentials)	RINCIPALS AND ASSOCIATEESPO	NSIBLE FOR OSR PROJECT DESIGN	(Furnish complete			
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE				
Hardert, Mitchell, T. Chief Engineer & Vice President	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF OSR RELATED DESIGN EXPERIENCE: 18 Years	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:			
Brief Explanation of Responsibilitie	es					
Mr. Hardert will serve as principle-in-charge and will be responsible for the day-to-day project activities and guidance of the CBC staff. His main activities will include development of detailed project work plans to ensure the project activities are completed on time and on budget, and that the personnel required to efficiently complete this project will be identified. He will review the project at intermediate points and at project completion, as well as engineering and design work. Mr. Hardert will be responsible for technical specifications, oversight of construction drawings, calculations and cost estimates. He will oversee the geotechnical aspects of the project, including but not limited to subsurface exploration, foundation and embankment design, and slope stability. He will coordinate contract issues with the State of West Virginia.						
EDUCATION (Degree, Year, Specializat B.S. Civil Engineering, 1998, Univer MSHA Certified Impoundment Instructo	sity of Dayton or and Inspector					
MEMBERSHIP IN PROFESSIONAL ORGANIZAT	TIONS	REGISTRATION (Type, Year, St P.E, 2004, West Virginia	ate) 46 Other States			
ASCE		P.E., 2004, West Virginia P.E., 2003, Ohio				
13. PERSONAL HISTORY STATEMENT OF PR data but keep to essentials)	INCIPALS AND ASSOCIATES RESPO		(Furnish complete			
13. PERSONAL HISTORY STATEMENT OF PR data but keep to essentials)  NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE				
data but keep to essentials)	INCIPALS AND ASSOCIATES RESPO	YEARS OF EXPERIENCE	(Furnish complete  YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:			
NAME & TITLE (Last, First, Middle Int.)  Cross, Michael, L	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF EXPERIENCE YEARS OF OSR RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN			
NAME & TITLE (Last, First, Middle Int.)  Cross, Michael, L Project Manager  Brief Explanation of Responsibilitie  Mr. Cross will serve as the project management and business develop aspects of the exploration, design, developlants and refuse disposal areas. He has not limited to the WVDEP, USACE, MSHA, U	YEARS OF OSR DESIGN EXPERIENCE:  Sanager. He is responsible for toment. Mr. Cross has over 30 yes elopment, implementation, closures developed an impeccable working SEPA, and WVOMHST.	YEARS OF EXPERIENCE YEARS OF OSR RELATED DESIGN EXPERIENCE: 34 Years  he day-to-day operations of the ars' of experience in the minimal and reclamation of surface min g relationship with the governme	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:  e office, staff management, ng industries including all es, deep mines, preparation ntal agencies including but			
NAME & TITLE (Last, First, Middle Int.)  Cross, Michael, L Project Manager  Brief Explanation of Responsibilitie  Mr. Cross will serve as the project management and business develop aspects of the exploration, design, develop aspects of the exploration, design, develop aspects of the WVDEP, USACE, MSHA, UMR. Cross will coordinate all engineering CBC's Charleston, WV office. He will be aspects of the project, including but no and mine discharge; oversee all constructional management and the subsurface Mr. Cross has over 18 years of direct con Coal Company and CONSOL. While working	YEARS OF OSR DESIGN EXPERIENCE:  Sanager. He is responsible for toment. Mr. Cross has over 30 yes elopment, implementation, closures developed an impeccable working SEPA, and WVOMHST.  And activities with CBC's primary responsible for day-to-day project of limited to stormwater managementation inspections and field work exploration, foundation and embaral mine land reclamation and professor Island Creek/CONSOL. Mr. Crossfor Island Creek/CONSOL.	YEARS OF EXPERIENCE YEARS OF OSR RELATED DESIGN EXPERIENCE: 34 Years  the day-to-day operations of the ars' of experience in the mining and reclamation of surface ming relationship with the government of the stream bank protection, erect activities. Mr. Cross will observe the stream bank protection, erect and assist with the geotechnic management experience with the stream bank protection of t	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:  e office, staff management, ng industries including all es, deep mines, preparation ntal agencies including but gineering work performed by eversee hydraulic/hydrologic osion and sediment control, cal aspects of the project, cy.  GEX Kentucky, Island Creek			
NAME & TITLE (Last, First, Middle Int.)  Cross, Michael, L Project Manager  Brief Explanation of Responsibilitie  Mr. Cross will serve as the project management and business develop aspects of the exploration, design, develop lants and refuse disposal areas. He has not limited to the WVDEP, USACE, MSHA, UMr. Cross will coordinate all engineering CBC's Charleston, WV office. He will be aspects of the project, including but not and mine discharge; oversee all constructions of the project, including but not limited to subsurface	YEARS OF OSR DESIGN EXPERIENCE:  Sanager. He is responsible for toment. Mr. Cross has over 30 yes elopment, implementation, closures developed an impeccable working SEPA, and WVOMHST.  In activities with CBC's primary responsible for day-to-day project limited to stormwater managementation inspections and field work exploration, foundation and embaral mine land reclamation and profor Island Creek/CONSOL, Mr. Cross has ion)	YEARS OF EXPERIENCE YEARS OF OSR RELATED DESIGN EXPERIENCE: 34 Years  the day-to-day operations of the ars' of experience in the mining and reclamation of surface ming relationship with the government of the stream bank protection, erect activities. Mr. Cross will observe the stream bank protection, erect and assist with the geotechnic management experience with the stream bank protection of t	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:  e office, staff management, ag industries including all es, deep mines, preparation ntal agencies including but agineering work performed by eversee hydraulic/hydrologic osion and sediment control, cal aspects of the project, cy.  GEX Kentucky, Island Creek			

MEMBE. IP IN PROFESSIONAL ORGANIZAT	IONS	REGISTRATION (Type, Year, State)			
		(-120, 1001, 50000)			
13. PERSONAL HISTORY STATEMENT OF PR	INCIPALS AND ASSOCIATES RESPO	NSIBLE FOR OSR PROJECT DESIGN	(Furnish complete		
data but keep to essentials)			103		
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE			
2	YEARS OF OSR DESIGN EXPERIENCE:	The state of the s	YEARS OF DOMESTIC		
Cornett, Roger, W. Project Engineer		EXPERIENCE:	WATERLINE DESIGN		
Project Engineer		35 Years	EXPERIENCE:		
Brief Explanation of Responsibilitie	S				
Mr. Cornett will serve as a project engi	neer, including field work, design	gn, preparation of construction of	irawings, technical		
specifications, calculations and cost es limited to stormwater management, erosio	timates. He will oversee hydraul	ic/hydrology senegte of the secto			
responsible for surface and underground	mining permitting, design, and re	scharge. Mr. Cornett has served a	s project manager		
		soluma olom.	-		
EDUCATION (Degree, Year, Specializat	ion)				
B.S. Physics & Mathematics, 1977, Mo	rehead State University				
M.S Civil Engineering, 1980, Univers	ity of Tennessee				
MEMBERSHIP IN PROFESSIONAL ORGANIZAT	IONS	REGISTRATION (Type, Year, State) 2 Other States			
		P.E., 2010, West Virginia PLS, 1987, Kentucky			
		P.E., 1981, Kentucky			
13. PERSONAL HISTORY STATEMENT OF PR	INCIPALS AND ASSOCIATES RESPO	NSIBLE FOR OSR PROJECT DESIGN	(Furnish complete		
data but keep to essentials)					
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE			
	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF OSR RELATED DESIGN	YEARS OF DOMESTIC		
Corda, Ioan, John		EXPERIENCE:	WATERLINE DESIGN		
Project Engineer		48 Years	EXPERIENCE:		
Brief Explanation of Responsibilitie	S				
*					
Mr. Corda will serve as a project engine	er, including develop grading pla	ans, seepage analysis, seismic st	ability analysis, evaluate		
soil borrow areas, perform hydrologic an specifications.	d hydraulic design calculations,	reclamation, and develop contrac	t drawings and		
specifications.					
EDUCATION (Degree, Year, Specializat	ion)				
B.S. Civil Engineering, 1964, Constru	uction Institute of Bucharest	. Romania			
M.S. Civil Engineering, 1977, Polyte	chnical Institute of Buchares	t, Romania			
55 (56) (45)		The Control of the Co			
MEMBERSHIP IN PROFESSIONAL ORGANIZAT	IONS	REGISTRATION (Type, Year, Sta	2+21		
		P.E., 1997, Ohio	100)		
13. PERSONAL HISTORY STATEMENT OF PR	TNCTPALS AND ASSOCIATES RESPON	METRIE FOR OCR PROJECT DESIGN	/Demark complete		
data but keep to essentials)	INCIPADD AND ADDOCIATED RESPON	ASIBLE FOR OSK PRODECT DESIGN	(Furnish complete		
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE			
(adder 11150)	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF EXPERIENCE YEARS OF OSR RELATED DESIGN	YEARS OF DOMESTIC		
DeNeal, Gerald L.	The state of the s	EXPERIENCE:	WATERLINE DESIGN		
Project Engineer		34 Years	EXPERIENCE:		

Brief planation of Responsibilities
Mr. DeNeal will serve as Senior Technical Reclamation Advisor.

Mr. DeNeal has over 34 years of direct coal mine land reclamation and project management experience with Peabody Coal Company (now Peabody Energy Corp.), J.J. Track Mining Co, Inc., Kerr-McGee Coal Corp., and The American Coal Company, Inc. In this capacity, Mr. DeNeal was site manager for large coal mine reclamation projects in Kentucky, Illinois, Indiana, Missouri, Oklahoma, Arizona and Wyoming. Mr. DeNeal has done extensive coal mine reclamation planning and budgeting for surface strip operations (dragline/shovel), two seam truck carry-back operations, large truck/shovel carry-back operations and all sizes of underground coal operations, including longwall subsidence reclamation. In his career, Mr. DeNeal has demonstrated highly successful coal mine reclamation innovation and special techniques that improved vegetative productivity on "pre-law" abandoned mine lands.

EDUCATION (Degree, Year, Specialization)

B.S. Plant and Soil Science

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

American Society of Mining and Reclamation

Mining and Reclamation Council (MARC) of America

13. PERSONAL HISTORY STATEMENT OF PR data but keep to essentials)	INCIPALS AND ASSOCIATES RESPO	NSIBLE FOR OSR PROJECT DESIGN	(Furnish complete				
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE					
Nair, Deepa Project Engineer	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF OSR RELATED DESIGN EXPERIENCE: 8 Years	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:				
Brief Explanation of Responsibilities  Ms. Nair will serve as a project engineer. Her responsibilities will include hydraulic calculations, layout, drawing preparation, design, technical specifications, cost estimates, and field work. She will serve as the primary internal consultant for geotechnical investigations. Ms. Nair will be involved in stability analysis, soils classifications, and boring log analysis.							
EDUCATION (Degree, Year, Specializat B.S. Technology, 2002, University of M.S. Civil Engineering, 2005, Purdue	Kerala, India University						
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS  REGISTRATION (Type, Year, State)  P.E., 2011, Ohio							
data but keep to essentials)	13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR OSR PROJECT DESIGN (Furnish complete data but keep to essentials)						
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE					
Dunham, Erika Environmental Scientist	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF OSR RELATED DESIGN EXPERIENCE: 17 Years	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:				
Brief Explanation of Responsibilities							

Ms. Dunham will serve as environmental scientist for the project. She will coordinate required environmental support services for the completion of this reclamation design. Ms. Dunham will supervise environmental field crews and evaluate all analytical

analys	)—
EDUCATION (Degree, Year, Specialization) B.S. Ecological Engineering, 1995, Universidad Poplar Autonoma del	Estado de Puebla (UPAEP)
n	
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)

NAME & TITLE (Last, First, Middle Int.)	995 - PO (1996 PA) - PA (1996 - MATERIA PA) - PA	YEARS OF EXPERIENCE	
Bowling, Tony Project Surveyor	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF OSR RELATED DESIGN EXPERIENCE: 30 Years	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Brief Explanation of Responsibilitie	es		
Ar. Bowling will serve as Project Survey penchmarks, topographic surveys, boundar significant existing drainage courses. MEDUCATION (Degree, Year, Specializat	y surveys and/or property and de Tr. Bowling will oversee all surv	ed research, survey of boring loc	ations and profiling
3.S Civil Engineering, 1983, Univers	ity of Kentucky		
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State) P.E., 1985, Kentucky PLS, 1984, Kentucky	
13. PERSONAL HISTORY STATEMENT OF PR data but keep to essentials)	INCIPALS AND ASSOCIATES RESPO	NSIBLE FOR OSR PROJECT DESIGN	(Furnish complete
NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
Summers, S., Mark Project Surveyor/ Technical Advisor	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF OSR RELATED DESIGN EXPERIENCE: 37 Years	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:

EDUCATION (Degree, Year, Specialization)
B.S. Forestry, 1975, University of Kentucky

data but keep to essentials)	RINCIPALS AND ASSOCIATES RESPO	NSIBLE FOR OSR PROJECT DESIGN	(Furnish complete	
NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE			
Highlander, Eugene, D. Field Engineer	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF OSR RELATED DESIGN EXPERIENCE: 46 Years	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:	
Brief Explanation of Responsibilities	es			
Mr. Highlander will serve as a field endesign, identification of borrow site for the deep mines and recommendations for the deep mines and recommendations.	or soil cover, and investigation a mine seals.	illing and geotechnical analysis and design of solutions for subsu	for slope stability rface hydrogeology within	
EDUCATION (Degree, Year, Specializates. Civil Engineering, 1966, West N	tion) Virginia Institute of Technolo	gy		
MEMBERSHIP IN PROFESSIONAL ORGANIZAT	FIONS	REGISTRATION (Type, Year, St P.E., 1973, West Virginia	ate)	
13. PERSONAL HISTORY STATEMENT OF PR data but keep to essentials)	RINCIPALS AND ASSOCIATES RESPO	NSIBLE FOR OSR PROJECT DESIGN	(Furnish complete	
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE		
Reed, Chad Construction Engineer	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF OSR RELATED DESIGN EXPERIENCE: 15 Years	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:	
construction Engineer			4	
Brief Explanation of Responsibilitie	es			
Brief Explanation of Responsibilities Mr. Reed will serve as construction engidentification of borrow site for soil of hydrogeology within the deep mines and responsible to the	ineer. He will coordinate the dri cover, field verify mapping, and : recommendations for mine seals.	lling and geotechnical analysis finvestigation and design of solut	or slope stability design, ions for subsurface	
Brief Explanation of Responsibilitie  Mr. Reed will serve as construction engineering identification of borrow site for soil of	ineer. He will coordinate the dril cover, field verify mapping, and recommendations for mine seals.	lling and geotechnical analysis finvestigation and design of solut	for slope stability design, ions for subsurface	

DESIGN SERVICES	MENT AVAILABLE IN THE PRIMARY OFFICE WHICH WILL BE	USED TO COMPLETE OSR
Equipment:	Software:	
Plotters	AutoCAD/ Civil 3D	Pile Buck
Digital Cameras	MicroStation	НҮ-В
Photocopiers/Printers/Scanners	Microsoft Office Suites	Cande
Surveying Stations	Sewer CAD	Retain Pro
GPS Units	Water CAD	Scour
Trucks	Hydrocalc Hydraulics	Brass Culvert
ATV	TR-55	Math CAD
Drill Rigs	Numerous Hydrology/Hydraulic Models	Multspan
Nuclear Density Gage	Maptech (Professional)	BRG Abut
Soils & Material Lab	REAME	L-Pile
	GeoPack Design	GeoSlope
	ARC Gis	Key WA-II
	Adobe	MSE WA-II
	Carlson	PC Stable
	HEC-Raz	-
	Geomotions	
	SedCad	

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
CBC Engineers WV mining	related experience - De	esign & permitting projec	ts	
Roaring Creek Refuse Area, O-2022-10, Refuse Impoundment / Coarse Refuse Fill, Brook Run, Randolph Co., WV	Roaring Creek Coal Co., LLC, 109 Appalachian Dr., Beckley, WV 25801	Design and obtain approvals from MSHA, WVDEP - SMA, NPDES, Dam, 401 Certification & USACE 404 Individual Permits	NA. New facility	MSHA - 95% WVDEP SMA/Dam - 100% complete - waiting on final approval from WVDEP headquarters, NPDES 85%, 401 - 97%, 404 - 75%
Roaring Creek Deep Mine U-2016-10, Brook Run, Randolph Co., WV	Roaring Creek Coal Co., LLC, 109 Appalachian Dr., Beckley, WV 25801	Design and obtain approvals from WVDEP - SMA, NPDES, 401 Certification & USACE 404 Individual Permits NA. New facility	NA. New facility	WVDEP SMA/NPDES - 100% complete - waiting on final approval of 401/404
Roaring Creek Prep Plant O-2020-10, Brook Run, Randolph Co., WV	Roaring Creek Coal Co., LLC, 109 Appalachian Dr., Beckley, WV 25801	Design and obtain approvals from WVDEP - SMA, NPDES, 401 Certification & USACE 404 Individual Permits	NA. New facility	WVDEP SMA/NPDES - 1009 complete - waiting on final approval of 401/404
Payne Branch Refuse Impoundment, S-4003- 99, Payne Branch, Wyoming Co., WV	Bluestone Coal Corp., 100 Cranberry Creek, Beckley, WV 25801	Design and obtain MSHA, WVDEP - SMA, NPDES, Dam permit	NA. New facility	MSHA - approved WVDEP SMA - 86%, NPDES - 71%, DAM 37%
Nufac Combined Refuse Fill, S-4025-86, Little White Oak Creek of Pinnacle Creek	Bluestone Coal Corp., 100 Cranberry Creek, Beckley, WV 25801	Design and obtain MSHA, WVDEP - SMA, NPDES,	NA. New facility	MSHA - 75% WVDEP SMA 61%, NPDES 57%

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
CBC Engineers WV refuse	e related experience - Co	nstruction Monitoring		
Tinsley Branch Impoundment, O-5032-99	Bandmill Coal Corp., County Route 14, Rum Creek Road Yolyn, WV 25654	Conduct seven day inspections, prepare & submit quarterly certifications to WVDEP and annual certifications to MSHA	NA	On going
Monclo Impoundment, O- 51-85	Logan Avenue, Wharncliffe, WV 25651	Conduct seven day inspections, prepare & submit quarterly certifications to WVDEP and annual certifications to MSHA	NA	On going
Holden 22 Impoundment/Slurry Cells, P-606	Coal-Mac, Inc., PO Box 1050 Holden, WV 25625	Conduct seven day inspections, prepare & submit quarterly certifications to WVDEP and annual certifications to MSHA	NA	On going
Lower Big Branch Impoundment/Capped, O- 18-82	Performance Coal, PO Box 69, Naoma, WV 25140	Conduct seven day inspections, prepare & submit quarterly certifications to WVDEP and annual certifications to MSHA	NA	On going
Slippery Gut Empoundment, O-6-81	Hobet Mining, LLC PO Box 305 Madison, WV 25130	Conduct seven day inspections, prepare & submit quarterly certifications to WVDEP and annual certifications to MSHA	NA	On going
Bragg Fork Impoundment, S-128-78	Hobet Mining, LLC PO Box 305 Madison, WV 25130	Conduct seven day inspections, prepare & submit quarterly certifications to WVDEP and annual certifications to MSHA	NA	On going

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
CBC Engineers WV refuse	related experience - Co	nstruction Monitorina		
Delbarton Impoundment, D-5081-91	Delbarton Mining Company, State Route 65, Thunder Ridge Road Delbarton, WV 25670	Conduct seven day inspections, prepare & submit quarterly certifications to WVDEP and annual certifications to MSHA	NA	On going
ockhouse Impoundment, 0-44-84	Stirrat Coal Co., Route 44 South Stirrat, WV 25638	Conduct seven day inspections, prepare & submit quarterly certifications to WVDEP and annual certifications to MSHA	NA	On going
Superior Sediment Pond 4, S-5017-98	Stirrat Coal Co., Route 44 South Stirrat, WV 25638	Conduct seven day inspections, prepare & submit quarterly certifications to WVDEP and annual certifications to MSHA	NA	On going
Ragland Holden 25 Empoundment, P-609	Coal-Mac, Inc., PO Box 1050 Holden, WV 25625	Conduct seven day inspections, prepare & submit quarterly certifications to WVDEP and annual certifications to MSHA	NA	On going
Brushy Fork Empoundment, 0-3010-95	Marfork Coal Company, Inc Route 3 Over 1 Pettus, WV 25209	Conduct seven day - Bi-weekly inspections	NA	On going
Cllis Creek Dry Refuse Pile, O-3017-91	Performance Coal, PO Box 69, Naoma, WV 25140	Conduct monthly inspections, prepare & submit quarterly certifications to WVDEP	NA	On going
River Fork Dry Refuse Pile, U-13-83	Performance Coal, PO Box 69, Naoma, WV 25140	Conduct monthly inspections, prepare & submit quarterly certifications to WVDEP	NA	On going
OTAL NUMBER OF PROJECT	S:	TOTAL ESTIM	ATED CONSTRUCTION COSTS:	\$

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
CBC Engineers WV refuse	related experience - Co	nstruction Monitorina		
Low Gap Dry Refuse Pile, O-3005-94	Marfork Coal Company, Inc Route 3 Over 1 Pettus, WV 25209	Conduct monthly inspections, prepare & submit quarterly certifications to WVDEP	NA	On going
ittle Horse Creek Dry efuse Pile, S-106-77	Hobet Mining, LLC PO Box 305 Madison, WV 25130	Visual Inspections	NA	On going
Blue Branch Refuse Area, O-10-83	Green Valley Coal Co. PO Box 190 Leivasy, WV 26676	Obtained 401/404 permits, prepare annual reports, monitoring reclamation, submit annual reports	NA	On going
OTAL NUMBER OF PROJECTS	S:	TOTAL ESTI	MATED CONSTRUCTION COSTS:	\$

		RM IS SERVING AS A			
PROJECT NAME, TYPE AND LOCATION	NATURE OF FIRMS RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONS	STRUCTION COST
				ENTIRE PROJECT	YOUR FIRMS RESPONSIBILITY
					*

PROJECT NAME, TYPE	NAME AND ADDRESS	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTE
AND LOCATION	OF OWNER			(YES OR NO
CBC Engineers WV refuse/impou	ndment related experience - De	sign & permitting projects		***
Cunnel Ridge Refuse Area, Structural Slurry Cells, Short Creek, Ohio Co., WV The scope of work included Sobtaining a SMA /NPDES from the NVDEP. Approval obtained from the NVDEP.	Tunnel Ridge, LLC, 771 Corporate Dr., Suite 1000, Lexington, KY 40503	NA.	2010	Under construction
olden 22 Slurry Cells, Holden, WV The scope of work included the lesign of additional slurry cell tages, sediment structures, tonveyance channels, an abandonment than and a revegetation plan. pproval obtained from MSHA.	Coal-Mac, Inc., PO Box 1050 Holden, WV 25625	NA.	2013	Under construction
ufac Slurry Cells, S-4025-86, ittle White Oak Creek of Pinnacle reek, Wyoming Co., WV he scope of work included the esign of slurry cells, sediment ontrol structures, conveyance hannels, an abandonment plan and a evegetation plan. Approval btained from the WVDEP and MSHA.	Bluestone Coal Corp., 100 Cranberry Creek, Beckley, WV 25801	NA.	2011	Yes
ive Mile Hollow Impoundment, S-033-07, Kanawha Co., WV he scope of work included btaining a SMA/NPDES permit. complete design for a slurry mpoundment including sediment tructures, conveyance channels, a coxic material handling plan, an bandonment plan and a revegetation lan.	Coyote Coal Co., LLC, 500 Lee St. East, Suite 900, Charleston, WV, 25301	NA	2013	No
ive Mile Combined Refuse Fill, S- 033-07 Kanawha Co., WV he scope of work included btaining a SMA/NPDES permit. omplete design for a slurry mpoundment including sediment tructures, conveyance channels, a oxic material handling plan, an beandonment plan and a revegetation lan. Design included conversion f a slurry impoundment to a ombined refuse fill.	Coyote Coal Co., LLC, 500 Lee St. East, Suite 900, Charleston, WV, 25301	NA	2013	No
he American Coal Co., Reclamation ost Evaluation, Saline Co., IL he scope of work included the valuation of the reclamation costs or American Coal's use in planning or the future closure of its ining operations in southern llinois.	The American Coal Co., PO Box 727, Harrisburg, IL 62946	Reclamation estimate \$22.9 million	2013	Under construction

18. MPLETED WORK W	THIN LAST 5 YEAD	RS ON WHICH YOUR M HAS BEEN	A STIP CO	NICITI TANE TO OTHE	
PHASE OF WORK WHICH	YOUR FIRM WAS RI	ESPONSIBLE)	A SUB-CU	NSULTANT TO OTHE	ER FIRMS (IND) FE
PROJECT NAME, TYPE &	NAME &	ESTIMATED CONSTRUCTION COST	YEAR	CONGENTIONS	
LOCATION	ADDRESS OF	OF YOUR FIRM'S PORTION	IEAR	CONSTRUCTED	FIRM ASSOCIATED
	OWNER	or rooking groking.		( YES OR NO)	WITH
-					
(x)					
10 77 11					
19. Use this space to provide a	ny additional informat	ion or description of resources supporting y	our firm's	qualifications to perform	work for the West
vinginia Office of Special Reci	amation.			_	
20. The foregoing is a statement	nt of facts				
Signature:	HOL	Title: CHIEF Engin	١.	1 10	2-41
VICE PRESIDENT	VILLE	Title: CHIEF CASIA	ierę	Date: 6-10-7	2019
THE PICTIVES WI	_	V	• 1		
Printed Name: MiTCH	EV T. HAR	NAT			
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**Appendix F** 

							PI	ROJEC	T EXPER	RIENCE	REQU	IREMEN							PR		TAFF PAF Janageme			
PROJECT	Exp. Basis C=Corp. P=Personal	Additional Info Provided in Section (s)	Forfeited Surface Mine Reclamation	Fdorfieted Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Nitigation/ Replacement	Construction Inspection/Manageme nt	Water Treatment	Eq;uipment/Structure Removal	Stream Restoration	Geotechnical/Stability	NPDES/Stormwater preperation	Mitch Hardert, PE	John Corda	Chad Reed	Mike Cross	Roger Cornett, PE	David Hinkle
Tinsley Branch Impoundment O-5032-99	C/P	1				x			x		X		x				X	x	P/M	P/M	м			
Monclo Impoundment O-51-85	C/P	1				х		X	x		Х		х				Х	Х	P/M	P/M	M			
Holden 22 Impoundment P-606	C/P	1		300		x			X		Х		х				X	^	P/M	P/M	M		201	1
Holden 22 Slurry Cells P-606	C/P	1				X			x		X		X				X		P/M				P/M	M
Lower Big Branch	C/P	1				Х			x		X		X							P/M	M	М	P/M	M
Slippery Gut Impoundment O-6-81	C/P	1				х			X		X		X				X		P/M	P/M	M			
Bragg Fork Impoundment S-128-78	C/P	1	707.00			X			×		×		X				X	X	P/M	P/M	M			
Delbarton Impoundment O-5080-91	C/P	1	***			X			×		×		X			70000	X		P/M	P/M	M	M		
Rockhouse Impoundment O-44-84	C/P	1				x			×		X		X				X	X	P/M	P/M	M			
Superior Sed Pond #4 S-5017-98	C/P	1				X					×		X				X		P/M	P/M	M			
Ragland Holden 25	C/P	1				X	730		×		X		X				X		P/M	P/M	M			
Brush Fork Impoundment O-3010-95	C/P	1				X			X		×		X				X		P/M	P/M	M			
Ellis Creek Dry Refuse Pile 0-3017-91	C/P	1				X			,		×		X				X		P/M	P/M	M			

<sup>\*</sup> List whether project experience is corporate or personnel based or both.

1 WV refuse projects

<sup>\*\*</sup> Use this area to provide specific sections or pages if needed for reference.
\*\*\* List Primary Design personnel and their functional capacity for the projects listed.

							PI	ROJEC	T EXPER	RIENCE	REQU		ITS						PRI			RTICIPATIO	ON/CAPACI
PROJECT	Exp. Basis C=Corp. P=Personal	Additional Info Provided in Section (s)	Forfeited Surface Mine Reclamation	Fdorfieted Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/ Replacement	Construction Inspection/Managem ent	Water Treatment	Eq.uipment/Structure Removal	Stream Restoration	Geotechnical/Stability	NPDES/Stormwater preperation	Mitch Hardert, PE	John Corda, PE	Chad Reed	Mike Cross	
River Fork Dry Refuse Pile U-13-83	C/P	1				X							×						P/M	P/M	Ī.,		
Low Gap Dry Refuse Pile	C/P	1				×							X	7/7-22			****		P/M	P/M	M		
Little Horse Creek Refuse Pile S-106-77	C/P	1	***			×				*			X						P/M	P/M	M		
Blue Branch Refuse Area O-10-83	C/P	1				х			×	Х	X	×	X	X		Х	X	×	P/M	P/M	IVI	M	
Tunnel Ridge Strucutrual Slurry Cells O-2016-08	C/P	1				х			×	Х	Х	X					X		P/M	P/M		M	
ampbells Creek Slurry Cells S-6027-88	C/P	1				x			х	Х	Х						X		P/M	P/M	М	101	
Mile Hollow Impoundment S-3033-07	C/P	1				×			×	Х	Х	Х					X		P/M	P/M	1	M	
5 Mile Hollow Combined Fill S-3033-07	C/P	1				×			x	х	Х	х				52 - 72	X		P/M	P/M		M	
coyote Slurry Cells S- 6027-88	C/P	1				х			х		Х					3000	X		P/M	P/M	М	144	
Bluestone Slurry Cells S-4025-86	C/P	1				×			×	х	Х	X					X		P/M	P/M	M	M	
lufac Combined Refuse Fill S-4025-86	C/P	1				×			×	X	Х	X					X		P/M	P/M	1	M	
ayne Branch Impoundment S-4003-99	C/P	1				×			×	Х	X	X					X		P/M	P/M		M	
paring Creek Impoundment O-2022-10	C/P	1				x			×	Х	X	X		•		Х	×		P/M	P/M		M	
aniel Hollow Refuse Area O- 5016-04	C/P	1				×			х	х	X	х	×			Х	X	X	P/M			M	

<sup>\*</sup> List whether project experience is corporate or personnel based or both.

1 WV refuse projects

<sup>\*\*</sup> Use this area to provide specific sections or pages if needed for reference.
\*\*\* List Primary Design personnel and their functional capacity for the projects listed.

OSR and RELATED PR	OJECT E	XPERIENC	CE MAT	RIX	***				*******									_			34		
							Р	ROJEC	T EXPER	RIENCE	REQU											TICIPATIO	N/CAPACIT
PROJECT	Exp. Basis C=Corp. P=Personal	Additional Info Provided in Section (s)	Forfeited Surface Mine Reclamation	Fdorfieted Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/ Replacement	Construction Inspection/Managem ent	Water Treatment	Eq.uipment/Structure Removal	Stream Restoration	Geotechnical/Stability	NPDES/Stormwater preperation	Mitch Hardert, PE	John Corda, PE	Chad Reed	Mike Cross	
Roaring Creek Deep Mine U-2016-10	C/P	2			X	Х			×	Х	Х	×					Х	×	Р			M	
Roaring Creek Prep Plant O-2020-10	C/P	2				X			×	х	Х	X					Х	X	P			М	
Mettiki E Mine U-2001-04	C/P	2			Х	Х	Х		×		X	×		Х		x	Х	X	Р			M	
Slabcamp Stockton Deep Mine U-3010-02	C/P	2				х			х	Х	Х	×				X	X	X				M	
Enduring Freedom Surface Mine S-3013-08	C/P	2				Х	Х		X		×	×					Х	X				м	
Hatchet Surface Mine S-3007-06	C/P	2				Х	Х		х	X	X	×					X	X				M	
PGM Surface Mine S-3014-05	C/P	2				Х					X							X				M	
Federal Surace Mine S-3011-07	C/P	2				х			×		Х	×						×				M	
(ayford No. 5 Surface Mine S-3005-99	C/P	2				Х	Х				Х							X				M	
Skitter Creek No.2 Mine S-3011-99	C/P	2				X	Х				Х						Х					M	
Lilly Fork Surface Mine S-3021-93	C/P	2				X	Х				Х						Х	х				M	
ughes Creek Surface Mine S-3014-91	C/P	2		=		Х	Х				Х	X					X	X				M	
Sugarcamp Winifrede #3 Deep Mine	C/P	2			Х	X	Х		X		Х	×					Х	Х				M	

<sup>\*</sup> List whether project experience is corporate or personnel based or both.

2 WV deep mine, surface mine, prep plant projects

<sup>\*\*</sup> Use this area to provide specific sections or pages if needed for reference.
\*\*\* List Primary Design personnel and their functional capacity for the projects listed.

							Р	ROJEC	TEXPER	RIENCE												TICIPATIO	
PROJECT	Exp. Basis C=Corp. P=Personal	Additional Info Provided in Section (s)	Forfeited Surface Mine Reclamation	Fdorfleted Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/ Replacement	Construction Inspection/Managem ent	Water Treatment	Eq.uipment/Structure Removal	Stream Restoration	Geotechnical/Stability	NPDES/Stormwater preperation	Mitch Hardert, PE	John Corda, PE	Chad Reed	Mike Cross	
Elk Run Freshwater Impounmdent O-2012-96	C/P	1				Х			Х		Х	Х					Х		P/M			M	
Laxare East Surface Mine	C/P	1				Х																М	
Jones Branch Loadout	C/P	2			Х	Х	X				Х								Р			м	
494.4	C/P	2																					
	C/P	2																					
	C/P	2																					
	C/P	2																200 100					
	C/P	2																					
	C/P	2																					
	C/P	2																					
	C/P	2																					
	C/P	2																					
	C/P																						

<sup>\*</sup> List whether project experience is corporate or personnel based or both.

2 WV deep mine, surface mine, prep plant projects

<sup>\*\*</sup> Use this area to provide specific sections or pages if needed for reference.
\*\*\* List Primary Design personnel and their functional capacity for the projects listed.

							PI	ROJECT	EXPER	RIENCE	REQU	IREMEN							PRI	MARY ST.  *** M=Ma				
PROJECT	Exp. Basis C=Corp. P=Personal	Additional Info Provided in Section (s)	Forfeited Surface Mine Reclamation	Fdorfieted Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/ Replacement	Construction Inspection/Managem ent	Water Treatment	Eq;uipment/Structure Removal	Stream Restoration	Geotechnical/Stability	NPDES/Stormwater preperation	Mitch Hardert, PE	John Corda, PE	Chad Reed	Roger Cornett, PE	David Hinkle	Mark Summers
Left Fork Combined Refuse Fill 848-9023	C/P	3				Х					Х						×		P/M	P/M		P/M	М	M
Right Fork Impoundment 848-9023	C/P	3				×			×	1202	Х						X		P/M	P/M		P/M	М	М
Lovely Branch Impoundment 866-5152	C/P	3				×					Х						X		P/M	P/M		P/M	M	M
Puckett Impoundment 833-9055	C/P	3				x			Х		Х			2			X		P/M	P/M		P/M	M	M
Fourseam Impoundment 897-9005	C/P	3				×			х		Х						X		P/M	P/M		P/M	M	M
Bloss Branch Impoundment 826-8036	C/P	3				Х					Х						X		P/M	P/M		P/M	N/A	M
Little Camp Branch Impoundment 807-0298	C/P	3				X			X		X						X		P/M	P/M		P/M	M	M
Buckeye Creek Impoundment 897-0287	C/P	3				×					X						X		P/M	P/M		P/M	M	M
Right Fork Impoundment 897-9004	C/P	3				×					X						X		P/M	P/M		P/M	M	M
Beech Fork Slurry Cells 897-	C/P	3				×					X					D 1800	X		P/M	P/M		P/M		M
Stonecoal Impoundment /	C/P	3				×					X						X		P/M	P/M		P/M	M	M
Guthrie Impoundment	C/P	3				×					X					77	X		P/M	P/M		P/M	M	M
Big Branch Impoundment/ Coase Refuse Fill 680-8002	C/P	3				Х			х		X					100	X		P/M	P/M		P/M	M	M

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OSR and RELATED PR	OJECTE	XPERIENC	CE MAT	RIX				8																
							Р	ROJEC	T EXPER	RIENCE	REQU								PRI	MARY ST				
PROJECT	Exp. Basis C=Corp. P=Personal	Additional Info Provided in Section (s)	Forfeited Surface Mine Reclamation	Fdorfleted Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/ Replacement	Construction Inspection/Managem ent	Water Treatment	Eq;uipment/Structure Removal	Stream Restoration	Geotechnical/Stability	NPDES/Stormwater preperation	Mitch Hardert, PE	John Corda, PE	Chad Reed	Roger Cornett, PE	David Hinkle	Mark Summers
		1						T				,												
Halfmile Impoundment 866-8008	C/P	3				Х			X		Х						Х		P/M	P/M		P/M	M	M
Britton Br. Coarse Refuse Fill 866-0236	C/P	3				х					Х						X		P/M	P/M		P/M	M	М
Adams Fork Impoundment 866-9001	C/P	3				X					X						Х		P/M	P/M		P/M	M	M
Right Fork Coarse Refuse Fill 866-9002	C/P	3				х					X						X		P/M	P/M		P/M	M	M
Whitesburg Slurry Cells 826- 0683	C/P	3				Х					X						X		P/M	P/M		P/M	M	M
Manchester Plant Slurry Cells 826-8040	C/P	3				х					X						X		P/M	P/M		P/M	M	M
Stoney Fork Impoundment 807-8060	C/P	3				х					X						Х		P/M	P/M		P/M	M	M
Flint Ridge Impoundment / Coarse Refuse 813-8018	C/P	3				Х					Х						X		P/M	P/M		P/M	M	M
Minuteman Impoundment 889-8006	C/P	3				х			x		Х						X		P/M	P/M		P/M	M	M
Webb Br. Impoundment 836-8066	C/P	3				х			×		Х						X		P/M	P/M		P/M	M	M
Harris Br. Impoundment 897-8048	C/P	3				х			×		X						X		P/M	P/M		P/M	M	M
Lick Br. Impoundment 860-9014	C/P	3				х					X						X		P/M	P/M		P/M	M	M
Hurricane Br. Refuse / Slurry Cells 860-0467	C/P	3				×					X						X		P/M	P/M		P/M	M	M
Cow Branch Impoundment 898-9012	C/P	3				х					x						×		P/M	P/M		P/M	M	M

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Alden Resources Permit 861-5353	C/P	4			X	X			×		X	×		Х			X	×				P/M	M	M
Alden Resources Permit 861-5354	C/P	4			×	X			×		Х	×		Х			X	×				P/M	M	М
Alliance Coal LLC Permit 854-0252	C/P	4			Х	X			×		X	×		X			X	×				P/M	M	M
Alliance Coal LLC Permit 854-0256	C/P	4			Х	X			×		X	×		X			Х	×				P/M	IVI	M
Arch Coal, Inc Permit 813-5025	C/P	4			Х	X			X		X	X		×			X	X				P/M	M	M
Arch Coal, Inc Permit 813-5026	C/P	4			Х	X			X		X	X		X			X	×		A SECTION		P/M	IN .	M
Arch Coal, Inc Permit 813-5035	C/P	4			Х	X			×		X	X		X			X	X				P/M	M	M
Arch Coal, Inc Permit 813-5037	C/P	4			Х	×			×		Х	X		X			X	X				P/M	M	M
Century Operations, LLC Permit 807-5203	C/P	4			Х	x	-10-		×		Х	X		X			X	X				P/M	M	M
Consol of Kentucky, Inc. Permit 836-5238	C/P	4			Х	х			X		X	X		X			X	X				P/M	M	M
Consol of Kentucky, Inc. Permit 860-5010	C/P	4			X	X			X		X	X		X			X	X				P/M	M	M
Consol of Kentucky, Inc. Permit 860-5218	C/P	4			X	X			×		X	X		X			X	X				P/M	M	M
Consol of Kentucky, Inc. Permit 867-5182	C/P	4			X	х		1 12 11	X		X	X		X			Х	X				P/M	M	M
Lesline Resources Permit 813-5023	C/P	4			X	x			X		Х	X		X			X	X				P/M	M	M

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4 Kentucky deep mine projects

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ational Coal Corporation Permit 807-5207	C/P	4			×	X			X		×	T <sub>x</sub>		X			X	×				P/M	M	М
ational Coal Corporation Permit 848-5432	C/P	4			X	X			X		X	×		X			X	X				P/M	M	M
Straight Creekl Coal Resources Co Permit 807-5207	C/P	4			X	X			Х		X	Х		X			X	х				P/M	M	М
74.6																								
													30 S = 278											T

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4 Kentucky deep mine projects

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&G Coal Corporation				I								T			l					Г		T	Τ	1
Permit 867-0455  Alden Resources Permit 861-0516	C/P	5				X	X				X	X		X		_	X	X				P/M	M	M
Alden Resources Permit 918-0418	C/P	5				×	X				X	X		×			X	X				P/M P/M	M	M
Appalachian Fuels Permit 860-0401	C/P	5				×	Х				X	X		X			X	×				P/M	M	M
Arch Coal Inc. Permit 813-0291	C/P	5				х	Х				Х	Х		X			X	X				P/M	M	M
Arch Coal Inc. Permit 813-0293	C/P	5				х	Х				Х	Х		Х			Х	Х				P/M	M	M
Arch Coal Inc. Permit 813-0294	C/P	5				х	X				Х	Х		Х			Х	×				P/M	M	M
Arch Coal Inc. Permit 813-0348	C/P	5				х	Х				Х	Х		Х			Х	х				P/M	M	М
Arch Coal Inc. Permit 813-0448	C/P	5				Х	Х				Х	Х		X			Х	×				P/M	М	М
Arch Coal Inc. Permit 860-0429	C/P	5				Х	Х				Х	Х		Х			Х	x				P/M	М	м
Arch Coal Inc. Permit 897-0456	C/P	5				Х	Х				Х	Х		X			Х	x				P/M	M	М
Arch Coal Inc. Permit 897-0483	C/P	5				Х	Х				Х	X		Х			Х	Х				P/M	M	М
Arch Coal Inc. Permit 897-0543	C/P	5				х	Х				Х	X		Х			Х	Х				P/M	М	М
Arch Coal Inc. Permit 897-0575	C/P	5				X	Х				Х	×		Х			X	Х				P/M	M	M

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B&W Resources, Inc. Permit 826-0639	C/P	5				X	Х				X	X		Х			X	×				P/M	М	M
B&W Resources, Inc. Permit 826-0683	C/P	5				X	Х				Х	X		Х			X	X				P/M	M	M
B&W Resources, Inc. Permit 863-0314	C/P	5				x	Х				X	×		X			X	X				P/M	M	M
B&W Resources, Inc. Permit 8266-0283	C/P	5				X	Х				X	×		Х			X	X				P/M	M	M
B&W Resources, Inc. Permit 866-0287	C/P	5				X	X				X	X		X			X	X				P/M	M	M
B&W Resources, Inc. Permit 866-0322	C/P	5				×	Х				Х	X		X			Х	×				P/M	M	M
B&W Resources, Inc. Permit 866-0326	C/P	5				×	Х				X	X		X			X	X				P/M	M	M
B&W Resources, Inc. Permit 866-0330	C/P	5				×	Х				X	X		X			X	X				P/M	M	M
B&W Resources, Inc. Permit 866-0516	C/P	5				X	Х				X	X		×			X	X				P/M	M	M
B&W Resources, Inc. Permit 897-0450	C/P	5				X	X				X	X		X			X	X				P/M	M	M
B&W Resources, Inc. Permit 897-0478	C/P	5				X	X	1000			X	X		X			X	X				P/M	M	M
B&W Resources, Inc. Permit 897-0489	C/P	5				X	X				X	X		X			X	X				P/M	M	M
B&W Resources, Inc. Permit 897-0511	C/P	5				X	X				X	X		×			X	X				P/M	M	IVI
B&W Resources, Inc. Permit 897-0512	C/P	5		35.5581		×	X				X	X		X			X	X				P/M	M	M

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		8					Pl	ROJEC	TEXPER	RIENCE	REQU								PRII	MARY ST. *** M=M:	AFF PAR	TICIPAT	ON/CAP	ACITY
PROJECT	Exp. Basis C=Corp. P=Personal	Additional Info Provided in Section (s)	Forfeited Surface Mine Reclamation	Fdorfieted Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/	Construction Inspection/Managem ent	Water Treatment	Eq;uipment/Structure Removal	Stream Restoration	Geotechnical/Stability	NPDES/Stormwater preperation	Mitch Hardert, PE	John Corda, PE	Chad Reed	Roger Cornett, PE	David Hinkle	Mark Summers
B&W Resources, Inc.					1			1	Т			I	Т					1						_
Permit 897-0516	C/P	5				Х	Х				Х	X		X			Х	Х				P/M	M	М
Bledsole Coal Corporation Permit 866-0236	C/P	5				Х	Х				×	×		X			×	X				P/M	M	M
Bledsole Coal Corporation Permit 866-0256	C/P	5				X	X				X	×		Х			Х	х				P/M	M	M
Blue Mountain Mining, Inc Permit 826-0650	C/P	5				Х	Х				X	×		X			X	X				P/M	M	M
CDR Minerls Permit 860-0393	C/P	5				х	Х				Х	X		Х			X	X				P/M	M	M
Century Operations, LLC Permit 807-0298	C/P	5				х	Х				Х	Х		Х			X	X				P/M	M	M
Century Operations, LLC Permit 807-0367	C/P	5				х	Х				Х	×		X			X	X				P/M	M	M
Cheyenne Resources Permit 860-0356	C/P	5				х	X				Х	X		Х			Х	X				P/M	M	M
Cheyenne Resources Permit 860-0358	C/P	5				X	Х				Х	×		X			Х	×				P/M	M	M
Cheyenne Resources Permit 860-0377	C/P	5				×	Х				Х	×		Х			X	X				P/M	M	M
Cheyenne Resources Permit 860-0385	C/P	5				×	Х				Х	X		Х			Х	X				P/M	M	М
Cheyenne Resources Permit 860-0387	C/P	5				x	Х				Х	X		X			Х	X				P/M	M	M
Cheyenne Resources Permit 860-0393	C/P	5				×	Х				Х	X		X			X	X				P/M	M	M
Cheyenne Resources Permit 860-0480	C/P	5				х	Х				Х	×		X			Х	X				P/M	M	м

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						_																		
Cheyenne Resources Permit 860-0500	C/P	5				X	X				X	X		Х			X	×				P/M	M	M
Cheyenne Resources Permit 867-0348	C/P	5				х	Х				Х	×		Х			Х	X				P/M	M	M
Cheyenne Resources Permit 867-0413	C/P	5				х	Х				Х	×		Х			Х	X				P/M	M	M
Cheyenne Resources Permit 867-0421	C/P	5				Х	Х				X	×		X			X	X				P/M	M	M
Cheyenne Resources Permit 867-0440	C/P	5				Х	Х				X	×		X			X	X				P/M	M	M
Cheyenne Resources Permit 897-0421	C/P	5				х	Х				Х	×		X			X	X				P/M	M	M
D. Best Mining Permit 865-0078	C/P	5				х	X				X	×		Х			X	X				P/M	M	M
Dylan Mining Permit 865-0073	C/P	5				х	Х				X	×		X			X	X				P/M	M	M
Frasure Creek Mining Permit 813-0300	C/P	5				Х	Х				Х	×		X			X	X				P/M	M	M
Frasure Creek Mining Permit 813-0321	C/P	5				Х	Х				Х	X		Х			Х	X				P/M	M	M
Frasure Creek Mining Permit 813-0328	C/P	5				Х	Х				X	X		X			X	X				P/M	M	M
Frasure Creek Mining Permit 813-0350	C/P	5				х	X				Х	X		X			X	×				P/M	M	M
Frasure Creek Mining Permit 860-0467	C/P	5				Х	X				Х	X		X			X	×				P/M	M	M
Frasure Creek Mining Permit 860-0470	C/P	5				х	Х				Х	X		X			X	X				P/M	M	M

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rasure Creek Mining Permit 897-0497	C/P	5				Х	X				×	×		X			X	×				P/M	M	M
Frasure Creek Mining Permit 897-0499	C/P	5				×	Х				Х	×		Х			Х	X				P/M	M	М
Frasure Creek Mining Permit 897-0500	C/P	5				Х	X				X	×		X			X	Х				P/M	M	М
rasure Creek Mining Permit 897-0503	C/P	5				х	Х				×	×		X			X	×				P/M	M	M
H&D Coal Company Permit 860-0412	C/P	5				X	Х				X	X		×			X	X				P/M	M	M
Investment Energy Permit 918-0462	C/P	5				х	Х			-	X	X		Х			Х	X				P/M	М	M
Jackson Coal Permit 826-0637	C/P	5				х	Х				Х	X		X			X	X				P/M	M	M
Jamieson Permit 807-0292	C/P	5				х	Х				X	x		Х		×	Х	X				P/M	M	М
Jamieson Permit 902-0051	C/P	5				х	Х				Х	x		Х		Х	Х	X				P/M	M	M
J R Mining Permit 826-0595	C/P	5				Х	Х				Х	x		X			Х	X				P/M	M	M
J R Mining Permit 826-0637	C/P	5				х	Х				X	X		X			X	X				P/M	M	M
J R Mining Permit 863-0290	C/P	5				х	X				X	X		X			X	X				P/M	M	M
tucky Prince Mining Co. Permit 813-0249	C/P	5				х	Х				X	X		X			X	X				P/M	M	M
LLC Kentucky, LLC Permit 813-0249	C/P	5				X	X				X	X		X			X	X				P/M	M	M

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LC Kentucky, LLC Permit 826-0249	C/P	5				Х	X				×	X		X			X	X				P/M	M	M
LC Kentucky, LLC Permit 860-0351	C/P	5				x	Х	-			Х	×		Х			X	X				P/M	M	М
LC Kentucky, LLC Permit 860-0356	C/P	5				X	X				X	X		X			X	×				P/M	M	M
LC Kentucky, LLC Permit 860-0418	C/P	5				×	X				X	×		×			X	×				P/M	M	M
LC Kentucky, LLC Permit 860-0419	C/P	5				×	Х				Х	×		X			X	X				P/M	M	M
LC Kentucky, LLC Permit 866-0283	C/P	5				×	X				X	×		X			X	X				P/M	M	M
LC Kentucky, LLC Permit 866-0284	C/P	5				×	Х				X	X		X			X	X				P/M	M	M
LC Kentucky, LLC Permit 866-0286	C/P	5				х	Х				X	X		X			X	X				P/M	M	M
LC Kentucky, LLC Permit 880-0011	C/P	5				X	X				X	X		×			X	X				P/M	M	M
LC Kentucky, LLC Permit 880-0012	C/P	5				х	Х				Х	X		X			X	X				P/M	M	M
LC Kentucky, LLC Permit 880-0108	C/P	5				×	Х				X	X		X			X	X				P/M	M	M
LC Kentucky, LLC Permit 880-0165	C/P	5				X	X				X	X		X			X	X				P/M	M	M
LC Kentucky, LLC Permit 868-0166	C/P	5				X	X				X	X		×			X	X				P/M	M	M
LC Kentucky, LLC Permit 880-0168	C/P	5				X	X				X	X		×			X	X				P/M	M	M

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							P	ROJEC'	TEXPER	RIENCE	REQU									MARY STA				
PROJECT	Exp. Basis C=Corp. P=Personal	Additional Info Provided in Section (s)	Forfeited Surface Mine Reclamation	Fdorfleted Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/ Replacement	Construction Inspection/Managem ent	Water Treatment	Eq;uipment/Structure Removal	Stream Restoration	Geotechnical/Stability	NPDES/Stormwater preperation	Mitch Hardert, PE	John Corda, PE	Chad Reed	Roger Cornett, PE	David Hinkle	
LC Kentucky, LLC Permit 897-0315	C/P	5				Х	×				X	×		X			X	×				P/M	M	M
LC Kentucky, LLC Permit 897-0459	C/P	5				Х	Х				Х	×		Х			Х	×				P/M	М	M
LC Kentucky, LLC Permit 898-0401	C/P	5				X	X				Х	X		X			X	X						T
LC Kentucky, LLC Permit 898-0534	C/P	5				X	X				X	X		X	70		^ X	X				P/M	M	M
LC Kentucky, LLC Permit 898-0748	C/P	5				X	X				X	X		X								P/M	M	M
LC Kentucky, LLC Permit 898-0761	C/P	5				×	X				X	X		X			X	X				P/M	M	M
Leeco, Inc Permit 860-0478	C/P	5				X	X				X	X		X			^	X				P/M	M	M
Leeco, Inc Permit 860-0486	C/P	5				X	X				X	X		×			×	X				P/M	M	M
Leeco, Inc Permit 867-0440	C/P	5				X	X				X	X	100	X			^	X				P/M	M	M
Leeco, Inc Permit 897-0287	C/P	5				X	X				X	X		X			X	X					M	M
Locust Grove Permit 897-0396	C/P	5				X	X				X	X		×			X	X				P/M	M	M
Locust Grove Permit 897-0415	C/P	5				X	X				X	X		X			X	X				P/M	M	M
Locust Grove Permit 897-0416	C/P	5				X	X				^X	X		×			X	X				P/M	M	M
Locust Grove Permit 897-0449	C/P	5				×	X				×	X		×			×	X				P/M P/M	M	M

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PROJECT	Exp. Basis C=Corp. P=Personal	Additional Info Provided in Section (s)	Forfeited Surface Mine Reclamation	Fdorfieted Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/ Replacement	Construction Inspection/Managem ent	Water Treatment	Eq;uipment/Structure Removal	Stream Restoration	Geotechnical/Stability	NPDES/Stormwater preperation	Mitch Hardert, PE	John Corda, PE	Chad Reed	Roger Cornett, PE	David Hinkle	
Locust Grove Permit 897-0451	C/P	5				X	Х				Х	×		Х			X	X				P/M	M	M
Locust Grove Permit 897-0566	C/P	5				х	Х				Х	×		Х			X	Х				P/M	M	M
Locust Grove Permit 919-0053	C/P	5				X	Х				Х	×		X		10.00	Х	X				P/M	M	М
taflandLocust Grove Permit 895-0186	C/P	5				×	Х				X	X		Х			X	X				P/M	M	M
Starfire Mining Permit 413-0075	C/P	5				х	X				Х	X		×			X	X				P/M	M	M
Starfire Mining Permit 860-0566	C/P	5				×	Х				Х	X		×			X	X				P/M	M	M
Starfire Mining Permit 860-0157	C/P	5				х	Х				Х	X		X			X	X				P/M	M	M
Sturgeon Mining Permit 813-0271	C/P	5				х	X				X	x		X			X	X				P/M	M	M
Sturgeon Mining Permit 895-0171	C/P	5				×	Х				Х	X		X			Х	X				P/M	M	M
Sturgeon Mining Permit 895-0175	C/P	5				x	Х				X	X		X			X	X				P/M	M	M
Sturgeon Mining Permit 897-0442	C/P	5				×	Х				X	×		X			X	X				P/M	M	M
Sturgeon Mining Permit 895-0142	C/P	5				×	Х				X	X		X		Х	X	X				P/M	M	M

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							PI	ROJEC'	TEXPER	RIENCE										MARY ST				
PROJECT	Exp. Basis C=Corp. P=Personal	Additional Info Provided in Section (s)	Forfeited Surface Mine Reclamation	Fdorfleted Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/ Replacement	Construction Inspection/Managem ent	Water Treatment	Eq;uipment/Structure Removal	Stream Restoration	Geotechnical/Stability	NPDES/Stormwater preperation	Mitch Hardert, PE	John Corda, PE	Chad Reed	Mike Cross	Gearald Deneal	Darrin Deneal
ugar Camp East Refuse Area	C/P	6				Х			X	X	X	×				х	X		P	P		M	М	M
Sugar Camp Northwest Refuse Area	C/P	6				x			X	х	X	×				Х	X		P	P		M	М	M
Sugar Camp Longwall #3 Refuse Area	C/P	6				х			x	Х	Х	×				X	X		P	P		IVI	M	M
gar Camp Deep Mine/Prep Plant - Permit 382	C/P	6				Х			Х		Х	Х		X			X	Х	Р				М	М

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6 Illinois projects

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\*\*\* List Primary Design personnel and their functional capacity for the projects listed.

							PF	ROJEC.	T EXPER	RIENCE				483			- Carlo		PRIM	MARY STA	AFF PAR	TICIPATIO	ON/CAPA ofessiona	CIT
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 $<sup>^{\</sup>star}\,\mathrm{List}$  whether project experience is corporate or personnel based or both.

6 Illinois refuse projects

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							PI	ROJECT	EXPER	RIENCE	REQU	IREMEN							PRII	MARY ST	AFF PAR	TICIPATIO	N/CAPA fessiona	CIT
PROJECT	Exp. Basis C=Corp. P=Personal	Additional Info Provided in Section (s)	Forfeited Surface Mine Reclamation	Fdorfieted Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/ Replacement	Construction Inspection/Managem ent	Water Treatment	Eq;uipment/Structure Removal	Stream Restoration	Geotechnical/Stability	NPDES/Stormwater preperation	Mitch Hardert, PE	John Corda, PE	Chad Reed	Mike Cross	Gearald Deneal	
ackbone Deep Mine	C/P				Х	Х			Х		Х	Х		Х			X					М		
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6 Illinois refuse projects

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							Р	ROJEC	TEXPER	RIENCE	REQU	IREMEN	TS				- W		PRII	MARY ST	AFF PAR	TICIPATIO	N/CAPACI
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lagnet Surface Mine 88-80	Р	A				X			х	Х	X		X				×	X				M	
ountour Surface Mine S- 5041-86	P	В				Х				Х	Х		х				Х	X				M	
ountour Surface Mine S- 5042-88	Р	В				X				Х	X		Х				X	X				M	
ountour Surface Mine S- 5062-88	P	В				×				Х	X		X				X	X				M	
Island Creek Deep Mine U-5061-88	Р				X	×				Х	X		X		X		X	X				M	
Island Creek Deep Mine U-5060-88	р				Х	X				X	X		X		X		X	X				M	
agnet Surface Mine S 64-82	Р					х					X		X				X	X				IVI	
sland Creek Surface Mine S-5013-95	Р					Х					X		X				×	X				M	
sland Creek Surface Mine S-123-78	P					х	Х				X		X				X	^				M	
sland Creek Surface Mine S-5084-86	Р					X					Х		X				×	х				NA.	
sland Creek Surface Mine 5-80	Р					X	Х			100	X		X				X	^				M	
Island Creek Refuse Impoundment O-37-85	Р					Х	1000			Х	X		X		X		X	Х				M	
and Creek Prep Plant O	Р					х	-3000			Х	X		X		X		X	X				M	
Sland Creek Surface Mine S-5041-89	Р				_	X	Х				X		X				X	X				M	

<sup>\*</sup> List whether project experience is corporate or personnel based or both.

- Island Creek projects \$5 million reclamation project to abated outstanding NOV's
- B Island Creek projects \$2.2 million reclamation project to abated outstanding NOV's

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PROJECT	Exp. Basis C=Corp. P=Personal	Additional Info Provided in Section (s)	PROJECT EXPERIENCE REQUIREMENTS															PRIM	PRIMARY STAFF PARTICIPATION/CAPACIT  *** M=Management P=Professional				
			Forfeited Surface Mine Reclamation	Fdorfieted Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/ Replacement	Construction Inspection/Managem ent	Water Treatment	Eq;uipment/Structure Removal	Stream Restoration	Geotechnical/Stability	NPDES/Stormwater preperation	Mitch Hardert, PE	John Corda, PE	Chad Reed	Mike Cross	
									,														
Seven Pines Surface Mine	Р					Х	Х		Х	Х	Х	×				Х	Х	X				М	
Poplar Fork Deep Mine	Р				Х	Х	Х		Х		Х	×				Х	Х	х				М	
Birch River Haulroad	Р					Х					X	×					Х	х				М	
Mercer Seam Deep Mine	Р				Х	Х	Х		Х		X	×				Х	X	Х				м	
Cove Mountain Mine	Р				Х	х	Х		X		Х	×				Х	Х	Х				м	
Brandy Station	Р					X	Х				Х	×				Х	Х	×		TO S			
Slabcamp Stockton Deep Mine	Р	N F			Х	х	Х		Х		Х	×		Х		Х	Х	х				м	
Glory Surface Mine	P					Х	Х		×		Х	×		Х		Х	Х	х				м	
Constitution Surface Mine	P					х	Х		X		Х	X		Х		Х	Х	х				М	
Mettiki E Mine	Р		11		Х	Х	Х		×		Х	X		Х		Х	Х	Х				M	
			77.2								_												
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- Island Creek projects \$5 million reclamation project to abated outstanding NOV's
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Synergy #1 Selenium Treatment Facility	P											T x		×								
pen Fork #2 Surface Mine	Р										Х			^_				X	M			
Mandy Cline Deep Mine	Р										Х							Х	М			
Armstrong Deep Mine	Р										Х							х	М			
Falcon #2 Contour Mine	Р										Х							Х	М			
Synergy #2 Surface Mine	Р										Х							Х	М			
reenbrier Smokeless Coal Mining, LLC	C/P											Х							М			
Midland Trail Resources	C/P											Х							М			
					7																	
32.00								- 83														

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Appendix G

# West Virginia Department of Environmental Protection Office of Special Reclamation

### Principle-in-charge

Mitchell T. Hardert, P.E.—18 yrs.

### **Project Manager**

Michael L. Cross—32 yrs.

#### Soils, Geological, and Hydrological Evaluations

Roger Cornett, P.E, PLS — 35 yrs. John Corda, P.E.— 48 yrs. Deepa Nair, P.E.— 8 yrs. Gerald DeNeal—34yrs. Erika Dunham— 17 yrs.

#### Surveying

Tony Bowling, P.E. PLS.—30 yrs.

Mark Summers, PLS—37 yrs.

### **Construction Monitoring**

Gene Highlander, P.E— 46 yrs.

Chad Reed—15 yrs.

Bill Robertson—13 yrs.

#### **CAD Designers**

David Hunt—18 yrs.

Meredith Coll-Atkins—8 yrs.

#### **Environmental Scientists**

Edward G. Galaska—27 yrs.

Meredith Coll-Atkins—12 yrs.

Erika Dunham—17 yrs.

**Appendix H** 

#### Location

Saline County, Illinois

#### Client

The American Coal Company

#### Services

Reclamation Cost Evaluation / estimate

# THE AMERICAN COAL COMPANY RECLAMATION COST EVALUATION

### The American Coal Company

Saline County, Illinois

CBC Engineers & Associates, Ltd. Inc. (CBC) was retained by The American Coal Company to evaluate reclamation costs for its use in planning for the future closure of the American Coal's mining operations in southern Illinois. These operations include a longwall mine, a 2600 TPH preparation plant and multiple refuse disposal areas. The reclamation involves approximately 1431 acres.

Reclamation costs were included in the estimate for the following items; 1. Removal of all surface coal handling equipment; 2. Demolition of silos; 3. Removal of all structures and equipment; 4. Removal of structural concrete; 5. Removal of contaminated soil;

6. Removal of gravel from areas other than permanent access roads:

7. Plugging all boreholes, shafts, and slope; 8. Placement of agricultural lime on the refuse area; 9) Placing soil cover over all disturbed areas: and 10. Stabilizing and planting disturbed area

The reclamation estimate includes the moving and placement of 2.8 million cubic yards of soil. CBC estimated the direct cost of final reclamation of the surface facilities at the Galatia Operations at near \$22.9 million.





#### Location

Ohio County, West Virginia

#### Client

Tunnel Ridge LLC.

#### Services

Mapping Drainage Design Sediment Pond Design Surface and Groundwater Monitoring sting Design Geotechnical Investigation Transportation Plans Planting Plans Toxic Materials Handling Plans Slope Stability Refuse Disposal

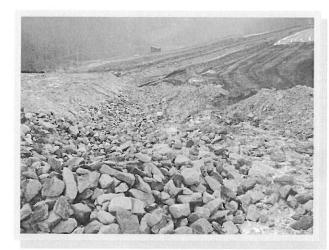
# TUNNEL RIDGE REFUSE FACILITY, WVDEP PERMIT APPLICATION

Tunnel Ridge, LLC Ohio County, West Virginia

CBC Engineers & Associates, Ltd. Inc. (CBC) was retained by Tunnel Ridge, LLC to permit

a coal refuse disposal system for the Tunnel Ridge preparation plant's refuse production.

The new refuse facility will provide approximately 20 years of refuse storage. Because of its height and storage capacity, the structure was classified as a Class C, High Hazard Structure. CBC conducted an extensive review of the underground mine works as part of the Assessment of Failure and Consequences of Failure. CBC prepared an Emergency Waning Plan to protect the residents living downstream from the structure.



An existing combined refuse fill was located on the proposed site. CBC conducted an extensive environmental review as part of the permit application. Several environmental issues were present on the site. An alkaline cap was designed to prevent potential acid mine drain-



age issues for the Pittsburgh seam refuse. CBC prepared the mining and reclamation plan and incorporated the refuse plans submitted to MSHA.

The application was submitted to the WVDEP in December 2008 and approved in February 2010. Construction of the refuse facility began in summer of 2010.



#### Location

Owsley, Breathitt, Perry Counties Kentucky

#### Client

Sturgeon Mining Company, Inc.

#### Services

Mapping Drainage Design Excess Spoil Design diment pond Design Surface and Groundwater Monitoring Blasting Design Transportation Plans Planting Plans Toxic Materials Handling Plans Slope Stability

### FREEMAN FORK SURFACE MINE DESIGN AND PERMIT APPLICATIONS

Sturgeon Mining Company, Inc. Owsley,, Breathitt, Perry Counties KY

CBC Engineers & Associates, Ltd. Inc. (CBC) was retained by Sturgeon Mining Co, Inc. to design and permit a surface, underground and highwall miner mine. CBC submitted a Technical Information for a Mining Permit (MPA03) and Notice of Intent KPDES applications to the KY Div. of Mine Permits and the KY Div. of Water for the respective permits.

CBC coordinated a stream delineation to determine if any jurisdictional waters of the U.S. would be impacted by the surface mine. No fills, sediment control facilities or ponds were located in any jurisdictional waters, therefore a Corps 404 permit and a State 401 Certification were not required.

The MPA03 and KPDES applications contain plans for mine reclamation including but not limited to mining and reclamation, backfilling and grading, mine sealing/management, excess spoil disposal, slope stability, toxic materials handlings, planting/revegetation, drainage and sediment control, transportation, subsidence, blasting, and water monitoring.

CBC evaluated the mining area to determine the Probable Hydrologic Consequences (PHC) of the mining operation, with respect to the hydrologic balance, on the permit area, adjacent areas, and over the proposed mineral extraction area. CBC developed a hydrologic reclamation plan to minimize disturbances to the hydrologic balance within the permit and adjacent areas; to prevent material damage outside the permit area; to meet applicable federal and state water quality laws and regulations; and to protect the rights of present water use.



CBC also prepared an submitted a Socio Economic Demonstration and Alternative Analysis KY Division of Water for the surface and underground mining operations describing the location, extent, duration and economic analysis and alternatives for the impacts of the mine on the surrounding area.

The mining permits and discharge permits were issued in 2005, 2006 and 2007. Mining operations are extracting the coal at the present time.



### Location

Randolph County, West Virginia

#### Client

Roaring Creek Coal Company

#### Services

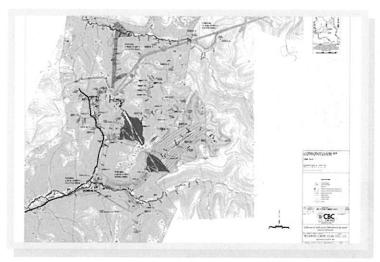
Mapping Surface and Groundater Analysis enthic Surveys Alternative Analysis Cumulative Impact Analysis Stream & Wetland Compensatory Mitigation Plans Jurisdictional Determination **NEPA Public Interest** Factors Impact Analysis

### ROARING CREEK COMPLEX, CORPS 404 INDIVIDUAL PERMIT AND STATE 401 CERTIFICA-TION

Roaring Creek Coal Company, LLC Randolph County, West Virginia

CBC Engineers & Associates, Ltd. Inc. (CBC) was retained by Roaring Creek Coal Company, LLC to design and permit its Roaring Creek Complex. complex consisted of a deep mine preparation plant and a coal refuse disposal area.

CBC submitted separate Surface Mine Applications (SMA's) and NPDES applications to the WVDEP for the deep mine, prep plant and refuse area. submitted the refuse designs to



MSHA. The refuse area consists of a coarse refuse embankment (slurry impoundment) and a coarse refuse fill (dry pile).

Due to the projected impacts to jurisdictional waters of the U.S., CBC prepared a 404 Individual Permit for submittal to the U.S. Army Corps of Engineers and a State 401 Certification to the WVDEP.

CBC prepared an Environmental Information Document (EID) for submittal to the Corps which contained an extensive alternative analysis to determine the least environmental damaging practicable alternative. As part of the evaluation of the project area, consideration was given to avoiding impacts to the aquatic ecosystem. If the impacts cannot be avoided, they must be minimized. CBC minimized the impacts. The EID also contained a determination of the cumulative effects on the aquatic ecosystem and addressed the NEPA Public Interest factors. CBC assisted with the development of Stream and Wetland Compensatory Mitigation Plan.

Work on the deep mine and prep plant sites has started. Work on the refuse area will commence once the remaining permit approvals are obtained.



#### Location

Randolph County, West Virginia

#### Client

Roaring Creek Coal Company

#### Services

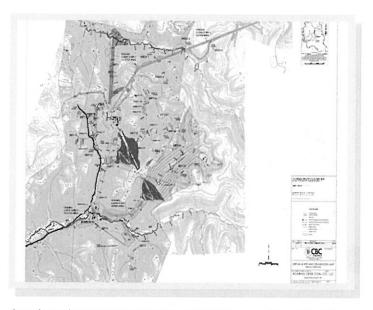
Mapping Drainage Design Excess Spoil Design Sediment pond Design rface and Groundwater Monitoring Blasting Design Geotechnical Investigation Transportation Plans Planting Plans Toxic Materials Handling Plans Slope Stability Refuse Disposal

#### ROARING CREEK COMPLEX, DESIGN AND PERMIT APPLICATIONS

Roaring Creek Coal Company, LLC Randolph County, West Virginia

CBC Engineers & Associates, Ltd. Inc. (CBC) was retained by Roaring Creek Coal Company, LLC to design and permit it's Roaring Creek Complex. The complex consisted of a deep mine preparation plant and a coal refuse disposal area.

CBC submitted separate Surface Mine Applications (SMA's) and NPDES applications to the WVDEP for the deep mine, prep plant and refuse area. CBC submitted the refuse designs to MSHA. The refuse area consists of a coarse refuse embankment (slurry impoundment) and a coarse refuse fill (dry pile). refuse facility will provide approximately 18.25 years of refuse storage.



Due to its height and storage capacity, the slurry impoundment was classified as a Class C. High Hazard Structure.

The WVDEP applications prepared by CBC contain plans for mine reclamation including but not limited to mining and reclamation, backfilling and grading, mine sealing/management, excess spoil disposal, slope stability, toxic materials handlings, planting/revegetation, drainage and sediment control, transportation, subsidence, blasting, refuse disposal, and water monitoring.

CBC evaluated the mining area to determine the Probable Hydrologic Consequences (PHC) of the mining operation, with respect to the hydrologic balance, on the permit area, adjacent areas, and over the proposed mineral extraction area. CBC developed a hydrologic reclamation plan to minimize disturbances to the hydrologic balance within the permit and adjacent areas, to prevent material damage outside the permit area; to meet applicable federal and state water quality laws and requlations; and to protect the rights of present water users.

CBC conducted an extensive geotechnical evaluation of the refuse site including the collection of soil, geological, and hydrological data. CBC's engineering design included; 1) a hydrologic evaluation of the embankment, 2) an evaluation of hydraulic control structures, 3) the preparation of construction drawings and specifications, 4) the preparation of material specifications, compaction, and material qualities, 5) a slope stability analysis, 6) a seepage analysis, 7) a deep mine subsidence and breakthrough potential analysis, and 8) an access road designs.

Work on the deep mine and prep plant sites has started. Work on the refuse area will commence once the remaining permit approvals are obtained.



#### Location

Nicholas County, West Virginia

#### Client

Alex Energy, Inc.

#### Services

Mapping Drainage Design Excess Spoil Design Sediment pond Design Surface and Groundter Monitoring Blasting Design Transportation Plans Planting Plans Toxic Materials Handling Plans Slope Stability

### HATCHET SURFACE MINE DESIGN AND PERMIT APPLICATIONS

Alex Energy, Inc.

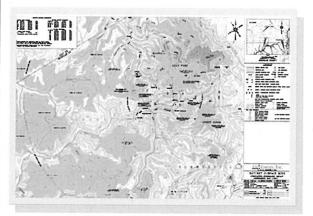
Nicholas County, West Virginia

CBC Engineers & Associates, Ltd. Inc. (CBC) was retained by Alex Energy, Inc. to design and permit a surface and highwall miner mine. CBC submitted a Surface Mine Applications (SMA's) and NPDES application to the WVDEP.

CBC conducted a stream delineation to determine if any jurisdictional waters of the U.S. would be impacted by the surface mine. No fills, sediment control facilities or ponds where located in any jurisdictional waters, therefore a Corps 404 permit and a State 401 Certification were not required.

The SMA and NPDES applications contain plans for mine reclamation including but not limited to mining and reclamation, backfilling and grading, mine sealing/management, excess spoil disposal, slope stability, toxic materials handlings, planting/revegetation, drainage and sediment control, transportation, subsidence, blasting, and water monitoring.

CBC evaluated the mining area to determine the Probable Hydrologic Consequences (PHC) of the mining operation, with respect to the hydrologic balance, on the permit area, adjacent areas, and over the proposed mineral extraction area. CBC developed a hydrologic reclamation plan to minimize disturbances to the hydrologic balance within the permit and adjacent areas; to prevent material damage outside the permit area; to meet applicable federal and state water quality laws and regulations; and to protect the rights of present water use.



CBC also prepared an submitted a Community Impact Statement to the WV Office of Coalfield Community Development for the surface mining operations describing the location, extent, duration and impact of the mine on the surrounding area.

The SMA and NPDES applications were issued in 2006. Mining has been completed and the site has been reclaimed



#### Location

Tucker County, West Virginia

#### Client

Mettiki Coal (WV) LLC.

#### Services

Mapping Hydrologic/Hydraulic Design & Evaluation Mine Design & **Projections** ter Treatment

# METTIKI E-MINE, WVDEP PERMIT APPLICATIONS

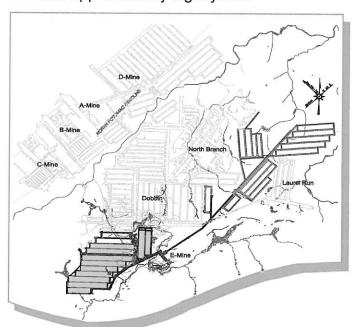
Mettiki Coal (WV), LLC

Tucker County, West Virginia

CBC Engineers & Associates, Ltd. Inc. (CBC) was retained by Tunnel Ridge, LLC to prepare numerous revisions for their E-Mine Longwall Deep Mine. These revisions include numerous changes to their subsidence control plans and an Order from the Director involving mining near its freshwater impoundment. CBC has prepared detailed seepage analysis for all subsidence control plans and assisted with the development of post-mining water treatment system.

The E-Mine is located along the West Virginia and Maryland border. The E-Mine is currently mining the Upper Freeport Seam. The structure of this seam is influenced by the North Potomac Syncline, and is located in a highly sensitive environmental area near the Canaan Valley.

The E-Mine was initially approved in May 2005. The current revisions have extended the life of the mine approximately eight years.





#### Location

Mingo County, West Virginia

#### Client

Delbarton Coal Company

#### Services

Mapping

Surface and Groundwater Analysis

inthic Surveys

Alternative Analysis Cumulative Impact Analvsis

Stream & Wetland Compensatory Mitigation Plans

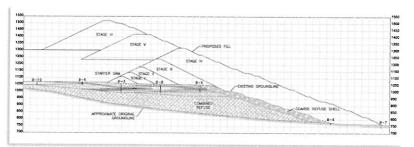
Jurisdictional Determination

**NEPA Public Interest** Factors

Impact Analysis

More Than Geotechnical Engineering

Impoundment Design Mingo County, West Virginia



This project encompassed the design of an impoundment for disposal of coarse refuse and slurry near Bias in Mingo County, West Virginia. The site is located at 37° 45' 00" North latitude and 83° 12' 03" West longitude and can be found on the Delbarton and Myrtle West Virginia 7.5 minute quadrangle maps of the U.S. Geological Survey series. The design includes a structure to be constructed atop the existing refuse disposal area with a final crest elevation of 1520 feet, providing approximately 26 years of slurry and coarse refuse disposal. Slurry will be disposed in the reservoir created by the embankment.



Upstream - Post Stage III Construction



Downstream - Post Stage III Construction

The overall concept for this project calls for construction of a starter dam and six (6) stages, the starter dam and four (4) stages are to be constructed in a downstream manner above the existing refuse disposal embankment by extending

that embankment up to elevation 1320 feet, and two (2) upstream stages will be constructed to extend the crest to a final elevation of 1520 feet. The main portion of the embankment for this project is to

be constructed in a downstream manner, with two (2) upstream stages being provided to maximize the disposal volume for both coarse and fine refuse. The embankment will have a decant pipe which will provide storm water passage and decant of the pool for each stage. The pipe will pass the design storm with three (3) feet of freeboard or greater for each stage. The decant pipe will evacuate 90% of the stored storm water in less than 7 days for all stages.

The embankment will be constructed with an initial starter dam embankment being constructed of coarse refuse excavated from within the impoundment, overburden, or plan run refuse. The remainder of the embankment will be constructed from coarse refuse once the plant begins operation. The embankment has a total of seven stages including the starter dam.



#### Location

Boone County, West Virginia

#### Client

Hobet Mining, LLC

#### Services

Mapping Drainage Design Sediment Pond Design Surface and Groundvater Monitoring asting Design Geotechnical Investigation Transportation Plans Planting Plans Toxic Materials Handling Plans Slope Stability Refuse Disposal

### BRAGG FORK REFUSE AREA, DESIGN AND PERMIT APPLICATION / CONSTRUCTION INSPEC-TION

Hobet Mining, LLC Boone County, West Virginia

CBC Engineers & Associates, Ltd. Inc. (CBC) was retained by Hobet Mining, LLC to design and permit a coal refuse disposal system for the Beth Station #79 preparation plant's refuse production. This new disposal facility was required due to the adjacent Slippery Gut Impoundment nearing completion.

CBC conducted a stream and wetland delineation and submitted a jurisdictional determination to the US Army Corps of Engineers to verify jurisdictional waters of the U.S. The least environmental damaging practicable alternative was selected for the location of the new re-

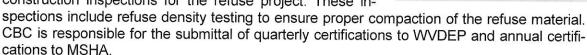
fuse site; on top of an existing valley fill.



CBC conducted an extensive geotechnical evaluation of the site including the collection of soil, geological, and hydrological data. CBC's engineering design included; 1) hydrologic evaluation of the embankment, 2) evaluation of hydraulic control structures, 3) preparation of construction drawings and specifications, 4) preparation of material specifications, compaction, and material qualities, 5) slope stability analysis, 6) seepage analysis, and 7) access road designs.

The new refuse facility will provide approximately 21.2 years of refuse storage. Because of its height and storage capacity, the structure was classified as a Class C, High Hazard Structure. CBC submitted the refuse design to MSHA and the WVDEP. The WVDEP application consisted of an Incidental Boundary Revision (IBR), an NPDES modification and a dam control application.

CBC is currently performing seven day observation/ construction inspections for the refuse project. These in-



Construction of the refuse facility began in September 2011.



#### Location

Nicholas County, West Virginia

#### Client

Green Valley Coal Company

#### Services

Mapping Surface and Groundwater Analysis Renthic Surveys ternative Analysis Cumulative Impact Analysis Stream & Wetland Compensatory Mitigation Plans Jurisdictional Determination NEPA Public Interest Factors Impact Analysis

### BLUE BRANCH REFUSE AREA. 404 CORPS INDIVIDUAL PERMIT AND STATE 401 CERTIFICA-TION

Green Valley Coal Company Nicholas County, West Virginia



CBC Engineers & Associates, Ltd. Inc. (CBC) was retained by Green Valley Coal Company, LLC to obtain a 404 Corps Individual Permit and State 401 Certification for the expansion of their existing Blue Branch Refuse Area

CBC coordinated a stream and wetland delineation to determine the projected impacts to jurisdictional waters of the U.S. CBC prepared and submitted a jurisdictional determination to the US Army Corps of Engineers to verify jurisdictional waters of the U.S.

CBC prepared an Environmental Information Document (EID) for submittal to the Corps which contained an extensive alternative analysis to determine the least environmental damaging practicable alternative. As part of the evaluation of the project area, consideration was given to avoiding impacts to the aquatic ecosystem. If the impacts cannot be avoided, they must be minimized. CBC minimized the impacts. The EID also contained

a determination of the cumulative effects on the aquatic ecosystem and addressed the NEPA Public Interest factors.

CBC coordinated the development and implementation of Stream Compensatory Mitigation Plan and development of the Wetland Compensatory Mitigation Plan. Final approvals of the 404 Corps IP and the State 401 Certification were obtained by CBC.



