



Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

State of West Virginia
 Centralized Expression of Interest
 02 - Architect/Engr

Proc Folder: 468533

Doc Description: EOI - Summerlee Refuse

Proc Type: Central Purchase Order

Date issued	Solicitation Closes	Solicitation No	Version
2018-08-16	2018-09-12 13:30:00	CEOI 0313 DEP1900000004	1

BID RECEIVING LOCATION

BID CLERK
 DEPARTMENT OF ADMINISTRATION
 PURCHASING DIVISION
 2019 WASHINGTON ST E
 CHARLESTON WV 25305
 US

VENDOR

Vendor Name, Address and Telephone Number:

RECEIVED

2018 SEP 12 AM 10:07

WV PURCHASING
 DIVISION

FOR INFORMATION CONTACT THE BUYER

Brittany E Ingraham
 (304) 558-2157
 brittany.e.ingraham@wv.gov

Signature X

FEIN #

55-0631834

DATE

9/11/18

All offers subject to all terms and conditions contained in this solicitation

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: 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 the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds 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: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, 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: CTL Engineering, Inc.

Authorized Signature: *[Signature]* Date: September 11, 2018

State of West Virginia

County of Monongalia, to-wit:

Taken, subscribed, and sworn to before me this 11 day of September, 2018.


My Commission expires August 3, 2023

AFFIX SEAL HERE



[Signature]

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

 CTL Civil / Survey Department Manager
(Name, Title)
Timothy Darrah
(Printed Name and Title)
1091 Chaplin Road, Morgantown, WV 26501
(Address)
304-292-1135/304-296-9302
(Phone Number) / (Fax Number)
tdarrah@ctleng.com
(E-mail address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

CTL Engineering, Inc.
(Company)


(Authorized Signature) (Representative Name, Title)

Timothy Darrah, CTL Civil / Survey Department Manager
(Printed Name and Title of Authorized Representative)

September 11, 2018
(Date)

304-292-1135/304-296-9302
(Phone Number) (Fax Number)

west virginia



REQUEST FOR QUALIFICATIONS
Engineering Services
Summerlee Refuse

September 12, 2018





EXPRESSION OF INTEREST

Engineering Services

Summerlee Refuse

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SECTION 1 INTRODUCTION



September 12, 2018

West Virginia Department of Environmental Protection
Office of Abandoned Mine Lands & Reclamation
601 57th Street SE
Charleston, WV 25304

Re: CEOI 0313 DEP1900000004
Expression of Interest
Design Engineering Services Proposal
Summerlee Refuse

Brittany E. Ingraham;

CTL Engineering, Inc. is very pleased to present this Letter of Interest to provide design engineering and related services for the West Virginia Abandoned Mine Lands and Reclamation Program. With over 80 years in the business, we feel our firm can provide the professionals and facilities the State of West Virginia is looking for.

CTL has evolved into a recognized leader in the Abandoned Mine Lands Engineering Design and Investigation field. We offer the services necessary to provide a non-subcontract, quality product to support your program. Our capabilities include laboratory facilities, drilling rigs, surveying systems, design equipment, and a qualified staff. We have 12 Professional Engineers, five of which are registered in West Virginia and have direct AML Design Experience. Our in-house disciplines of professionals include: Civil & Mining Engineers, CAD Designers, Surveyors, Geologists, Hydrologists and Biologists. We are experienced in completing more than 50 projects annually that require aerial mapping, support surveying with GPS, and final contouring for design.

Our in-house ability reaches beyond simply being an AML design firm. We also have extensive contract administration and management experience with the procedures of the state of West Virginia. Our invoicing procedures and accounting software has been accepted, used, and audited by various state agencies.

CTL's primary staff has over 125 years of experience with mine reclamation engineering on both a national and international level. Our qualifications and facilities are unsurpassed when it comes to Abandoned Mine Reclamation Design. With an office Morgantown, we can effectively respond to any AML Design tasks throughout West Virginia. In addition, we have six full time design teams available to complete AML design projects. Our corporation and individual staff members have extensive experience relative to reclamation design, highwall elimination, abandoned portal seals and drainage control structures. The Summerlee Refuse Project is similar in scope to more than 35 AML design projects we have successfully completed. Attached to this proposal are numerous examples of similar projects successfully designed and completed.

We sincerely appreciate the opportunity to submit this proposal to you for consideration. Should you have any questions or need additional information, please contact our office.

Respectfully submitted,
CTL Engineering of West Virginia, Inc.

Joseph Stanley
Business Development Manager



Executive Summary

LEGAL NAME OF PROPOSER:
CTL ENGINEERING, INC.

OFFICE RESPONSIBLE FOR WORK:
1091 CHAPLIN ROAD
MORGANTOWN, WV 26501

TELEPHONE NUMBER:
PH: 304.292.113

TYPE OF ENTITY:
Corporation

DUE DATE OF SUBMITTAL:
September 12, 2018

PROJECT MANAGER:
Timothy Darrah
tdarrah@ctleng.com

CLIENT RELATIONS:
Joseph Stanley
jstanley@ctleng.com

**CTL WAS BUILT ON THREE
FOUNDATIONAL PILLARS:**

COMMUNICATION

TEAMWORK

**LEADERSHIP IN
TECHNOLOGY**

www.ctleng.com

COMPETENCE TO PERFORM THE REQUIRED SERVICE. *CTL's goal is to show that our work is transparent and lean. We treat every project, every dollar as if it were our own because we are not a service but a business partner. Our mantra is "It is our project also".*

CTL is a multidisciplinary Consulting Firm that provides **Municipal Engineering, Civil Site Design, Surveying, Construction Inspection, Materials Testing and Geotechnical** services for private development and local agencies and municipalities. Our highly qualified Team is capable of providing all the services outlined in this Request; We have a wide range of experience that can be called upon as seen fit by the City in order to deliver all projects assigned to our Team on time, within budget, and as per contract documents and specifications. Our Team possesses the depth of resources, staff and knowledge to insure quick and efficient furnishing of qualified personnel as dictated by the City's needs.

ABILITY TO PERFORM EXPEDITIOUSLY. Seamless collaboration with the Project Managers/Engineers in all Divisions is essential for project success. We understand the role and responsibilities of the project engineer, inspector and technician and will become a true extension of the City's staff. We practice partnering on all projects by engaging and communicating with all members of the project team and all stakeholders involved with the project. Our Team possesses the depth of resources, staff and knowledge to insure quick and efficient furnishing of qualified personnel as dictated by the City's needs.

LOCAL WORKFORCE. 100% of the Team's key personnel are located in the Morgantown office with several employees from Marion County. CTL also has several AML projects in close proximity of the project.

CLOSING. We hope this submittal gives an indication of our qualifications, experience, and abilities. You are invited to visit our office and laboratory facilities at your convenience or we are willing to meet with members of the project team so that we can further demonstrate the quality of our operation.



SECTION 2 PROJECT APPROACH



Project Management Plan

Our approach to the **Summerlee Refuse Project** will be similar to other CTL AML refuse pile regrading projects.

The Project Management Plan we have developed for these sites are as follows:

The project manager will be solely responsible for expedient and accurate completion of each phase of the individual projects performed under this contract. He will review the project sites and discuss the specific scope of work for the project with the project representative from the WVDEP. A cost proposal will be prepared, in accordance with contract unit rates, based upon an estimate of manpower, equipment, and laboratory needs.

CTL will then mobilize a fully equipped survey crew to set survey control and map the project sites. Permanent control monuments will be established to ensure that the construction contractor can tie into the necessary baselines. The project manager will supervise the surveying tasks and provide budgetary control for this portion of the work.

A geotechnical investigation may be performed to delineate the thickness of mine refuse to determine and design the optimum stable grading plan. This investigation shall be performed with a focus on safety to insure the safety of the local inhabitants and dwellings as well as the safety of the drilling and geotechnical personnel.

Should field conditions dictate that additional work or a major modification is required, the project manager will contact the WVDEP representative immediately to confirm the changed conditions.

Following completion of the surveying, field investigation, and any material sampling, the analytical design work will begin. The Project Manager and Engineer will review the project data, evaluate the feasible alternatives and prepare a preliminary set of construction documents. The documents will include at a minimum:

1. A site map indicating existing conditions;
2. A tax map overlay with the parcels identified that may be impacted by the proposed design;
3. Proposed grading plans for elimination and backfilling of highwalls, including safely dewatering and excavation of all portals;
4. Provide Sedimentation and Erosion Control Plan
5. Site Profiles
6. Cross Sections
7. Drainage systems and control structures, with details
8. NPDES Permit
9. MM109 Permit
10. Survey control points
11. Miscellaneous Site details



- CTL will also provide all necessary data for the MM109 and NPDES permit including S&E Control Plans as required for the site construction and if deemed necessary, perform environmental assessments. CTL will make submittals and obtain the NPDES permit.
- In addition to preparation of the above-described drawings, a complete set of specifications will be prepared and outlined to describe in detail the scope and methods of work to be accomplished. An estimate of construction costs and the design calculations will also be submitted to the WVDEP for review and future reference.
- Following the submission of the construction documents, a project design review meeting will be coordinated with the WVDEP, CTL, and appropriate individuals to review the proposed plans.
- Recommendations for plan revisions will be discussed and implemented, as necessary, into the final design documents. Upon completion, all final documents, drawings, plans and specifications will be forwarded to the WVDEP for bidding purposes.
- At the request of the WVDEP, CTL will provide construction observation personnel.

Our Project Manager and/or Engineer will coordinate the pre-bid and pre-construction conferences with the WVDEP to address any questions and supply the necessary survey control data. Periodic inspections may be conducted by our Project Manager, as deemed necessary by the WVDEP, to address specific problems that arise during construction. A report will be prepared by CTL following each of these meetings detailing the findings, conclusions, recommendations, and responses to pertinent questions.



Project Scope

Summerlee Refuse

Project Scope of Work:

- Upgrade Access as Required.
- Clear and Grub Affected Areas.
- Regrade as Necessary.
- Construct and install drainage control items.
- Provide sediment control.
- Cover all exposed refuse with soil.
- Condition and revegetate all disturbed areas



**SECTION 3
CORPORATE HISTORY AND
QUALIFICATIONS**

Description of the Firm

CTL Engineering, Inc. is a full service **consulting engineering, testing and inspection company** with a significant amount of experience in the construction industry. We have over 250 employees including Registered Professional Engineers, Geologists, Metallurgists, Chemists, and a variety of Certified Engineering Technicians. CTL Engineering is qualified to provide services in the following disciplines: Civil and Municipal Engineering, Surveying, Observation and Testing of Construction Materials and Processes, Geotechnical Engineering, Environmental Services, Mechanical and Metallurgical Analysis, Non-Destructive Evaluations, Chemical Analysis, Roofing Design and Inspection, Building Envelope Evaluation, Pavement Design, Structural Steel and Product Testing.



CTL Engineering was established in 1927 and has maintained a presence within the State of West Virginia for over 30 years and throughout the State of Ohio for over 90 years. We have one of the most diverse firms in the region, a complete construction materials laboratory, a diversified local staff, and experience with large-scale local projects.

CTL Engineering operates under the guidance of our Quality System Manual, which addresses all requirements of ASTM E 329 "Standard Practice for Use in Evaluation of Testing and Inspection Agencies as Used in Construction," and AASHTO R18 "Establishing and Implementing a Quality System for Construction Materials Testing Laboratories."

CTL Engineering is regularly inspected by agencies such as the State Transportation Departments, the Cement and Concrete Reference Laboratory (CCRL) and the U.S. Army Corps of Engineers. Also, the National Institute of Science and Technology (NIST) and AASHTO accredit us in testing of concrete, soils, aggregates and asphalt.

- *CTL is regularly retained to provide services for private and public entities, (WVDEP, Army Corp of Engineers, West Virginia University, West Virginia University Hospitals, Mon Health Systems, City of Morgantown, MUB and other Municipalities*
- *CTL personnel are fully trained and equipped to perform the required task throughout the project*
- *CTL Engineering **emphasizes good communication and interpersonal skills** that make our personnel valuable assets*
- *CTL takes pride in completing projects in a **cost effective and timely manner***





AML & Relevant Project Experience

HIGHWALLS

- Anderson Highwalls, WVDEP
- Peninsula Highwalls, WVDEP
- St. Clair Portals, WVDEP
- Collins Mining, ODNR
- Miller Mining, ODNR

OPEN PITS

- Shinn's Run Portals, WVDEP
- Jones Trucking, ODNR
- General Clay #1 & #2, ODNR

OPEN MINE SHAFTS

- Kennel Mine Closure, MDE, AMLD
- Frostburg North Closure, MDE, AMLD
- Zilman Closure, MDE, AMLD

REFUSE PILES

- Hopewell Church Refuse & AMD, WVDEP
- Ream Refuse Pile, WVDEP
- Williams Refuse Pile, Private
- Harrison Power Plant, Allegheny Power

MINE SUBSIDENCE

- Fairmont Subsidence, WV DEP
- Lower Consol Road MDE, AMLD
- Terra Haute Airport, IN AML
- Farmington UMC, WV DEP Emergency
- Morningside Baptist, WV DEP Emergency
- Eccles Subsidence, WV DEP
- McArthur Subsidence, WV DEP
- Mark Kempner, NJ Private
- WV BRIM
- OMSIUA



MINE DRAINAGE/STREAM RESTORATION

- St. Clair Portals, WV DEP
- Aarons Run, MDE, AMLD
- Deckers Creek, WVDEP

LANDSLIDES

- Douglas Avenue Landslide, MDE, AMLD
- Schramm Landslide, MDE, AMLD
- Gordon Landslide, MDE, AMLD
- East Franklin Landslide, MDE, AMLD
- Cheat Neck Landslide, WV DEP
- McCourt Landslide, ODNR
- Caldonia Hill Slope Stability, MDE, AMLD

WATER SUPPLY REPLACEMENT

- Douglas Avenue Stormwater System Repair, MDE, AMLD
- Bald Knob & Potomas Hollow Water Investigations, MDE, AMLD
- Pee Wee Hill Supply Design, MDE, AMLD
- Pee Wee Will Water Feasibility Study, MDE, AMLD
- Fairview Water Feasibility, WV DEP
- Tioga Water Feasibility, WV DEP



Consulting Engineering · Testing · Inspection · Analytical Laboratory Services
Employee Owned · Established 1927

PROFESSIONAL SERVICES



Analytical Chemistry

- Organics
- Metals
- Liquid and Solid Fuels
- Soil and Water
- Oils and Sludge
- Solid and Hazardous Wastes
- Construction Materials

Computer Technology

- Drafting Services
 - AutoCad
 - Digitizing
 - Microstation
- Software Development
 - Internet and Intranet
 - Application Software

Construction Administration

- ODOT LPA Projects
- County and Municipal Projects
- Daily On-Site Inspections
- Owner's Representative

Construction Services

- Floor Flatness
- Soils, Concrete, Asphalt, Masonry, Fireproofing, and Steel
- Earth and Concrete Dams
- Pavements for Streets and Airports
- Pre and Post Construction Inspection
- Embankments, Fill, and Cut

Environmental

- Phase I and II ESAs
- RCRA Closure and Site Remediation
- Asbestos/Lead/Mold Surveys
- Abatement Design/Monitoring
- Wetlands Delineation, Permitting and Mitigation
- Endangered Species/Ecological Surveys
- Stormwater Management
- Water Resource Engineering
- Underground Storage Tank Management per BUSTR
- Hydrogeologic Studies and Aquifer Characterization

Existing Structure Evaluation

- Delamination Determination
- Bridges/Buildings
- Sonic Velocity Testing
- Half Cell Potential Testing

Forensic Science

- Roofing Failures
- Building Failures
- Legal Testimony
- Product Liability

Forensic Investigations

- Landslide, Soil and Foundation Failures
- Accident Reconstruction

Geotechnical

- Site Selection
- Pavement Design (including CBR Study)
- Foundation Analysis and Design
- Embankment and Earth Dam Analysis
- Slope Stability Analysis
- Subsurface Exploration - Drilling Services

Ground Penetrating Radar

- Concrete Inspection and Evaluation
- Bridge Inspection
- Utility Detection and Mapping

Materials Testing

- Concrete
- Aggregates
- Soils and Rock
- Clay and Masonry Products
- Bituminous Materials
- Petrographic Studies
- Concrete and Asphalt Mix Designs

Metallurgy

- Metallography
- Failure Analysis
- Fracture Analysis
- Corrosion Studies
- Tensile and Hardness
- Application Recommendations

Mining Engineering

- Mine Plan Design
- Permit Preparation
- Refuse Disposal Design
- Mine Reclamation Design
- Environmental Monitoring
- Subsidence Investigation
- Drainage Control Structures

Nondestructive Testing and Inspection

- Level II Services
- Ultrasonic Inspections
- Liquid Penetrant Inspections
- Magnetic Particle Inspections

Pavement Management

- Budgeting
- Prioritization
- Deterioration Rates
- Condition Assessment
- Maintenance and Rehabilitation Strategies
- Network Needs and Long Range Goals

Product Testing

- Calibration
- Design Analysis
- Safety Evaluation
- Hydrostatic Testing
- Mechanical and Physical Property Testing
- Load and Strength Testing

Roofing Engineering and Building Envelope Services

- Infrared and Nuclear Testing
- Air/Water Infiltration
- Quality Control
- Roof Surveys Evaluation
- Design and Construction Administration

Roof Management Systems

- Budgeting
- Prioritization
- Deterioration Rates
- Condition Assessment
- Maintenance and Rehabilitation Strategies

Security and Safety Systems

- Design
- Construction
- Paging Systems
- Video Surveillance
- Intrusion Detection
- Card Access Control
- Audio/Visual Solutions
- Digital Video Recording

Site/Civil Engineering

- Commercial Land Development
- Infrastructure Planning
- Residential/Community Planning

Surveying and Mapping

- Topographic Mapping Development
- Property Surveying and Boundary Determination
- Global Positioning System

Telecommunication Services

- Design
- Construction
- Existing Structure Analysis and Maintenance
- Lighting Systems
- Inventory and Warehousing

Welding and Quality Control

- QA/QC Programs
- Certified Welding Inspection
- Welding/Brazing Qualification
- Procedure Development

OFFICE LOCATIONS

2860 Fisher Road
Columbus, OH 43204
Phone: (614) 276-8123
Fax: (614) 276-6377

1310 S Franklin Road
Indianapolis, IN 46239
Phone: (317) 295-8650
Fax: (317) 295-8395

3085 Interstate Parkway
Brunswick, OH 44212
Phone: (330) 220-8900
Fax: (330) 220-8944

3902 New Vision Drive
Fort Wayne, IN 46845
Phone: (260) 482-4503
Fax: (260) 482-2002

633 High Street
Minford, OH 45653
Phone: (740) 820-8355
Fax: (740) 820-5698

102 Commerce Drive
Wapakoneta, OH 45895
Phone: (419) 738-1447
Fax: (419) 738-7670

1091 Chaplin Hill Road
Morgantown, WV 26501
Phone: (304) 292-1135
Fax: (304) 296-9302

2105 Schappelle Lane
Cincinnati, OH 45240
Phone: (513) 722-8665
Fax: (513) 834-6650

450 Grant St, Suite 110
Akron, OH 44311
Phone: (330) 994-1590

7655 Coppemine Drive
Manassas, VA 20109
Phone: (571) 229-5244

Sachina Engineering
407 "B" Block
SNS Arcade, Airport Road
Bangalore, India
560017
011-91-80-526-8615

www.ctleng.com



SECTION 4
ATTACHMENTS
CCQQ
RPEM

**WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
 AML CONSULTANT CONFIDENTIAL QUALIFICATION QUESTIONNAIRE "Attachment B"**

PROJECT NAME SUMMERLEE REFUSE	DATE (DAY, MONTH, YEAR) 12/9/2018	FEIN 55-063-1834
----------------------------------	--------------------------------------	---------------------

1. FIRM NAME CTL Engineering, Inc.	2. HOME OFFICE BUSINESS ADDRESS 2860 Fisher Road Columbus, OH 43204	3. FORMER FIRM NAME Columbus Testing Laboratories
---------------------------------------	---	--

4. HOME OFFICE TELEPHONE (614) 276-8123	5. ESTABLISHED (YEAR) CTL-1927 CTL-WV 1983	6. TYPE OWNERSHIP Individual <u>Corporation</u> Partnership Joint-Venture	6a. WV REGISTERED DBE (Disadvantaged Business Enterprise) YES <u>NO</u>
--	--	--	---

6. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE
 1091 Chaplin Road, Morgantown, WV 26501/ 304-292-1135/ CK Satyapriya, President / Morgantown - 16

7. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM CK Satyapriya, President	8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS Ali Jamshidi, Treasurer (614) 276-8123
---	--

9. PERSONNEL BY DISCIPLINE

<u>4</u> ADMINISTRATIVE - ARCHITECTS - BIOLOGIST <u>4</u> CADD DESIGNERS - CHEMICAL ENGINEERS <u>4</u> CIVIL ENGINEERS <u>7</u> CONSTRUCTION INSPECTORS - DESIGNERS - DRAFTSMEN	- ECOLOGISTS - ECONOMISTS - ELECTRICAL ENGINEERS <u>1</u> ENVIRONMENTALISTS - ESTIMATORS <u>1</u> GEOLOGISTS/GEOTECH ENG. - HISTORIANS <u>1</u> HYDROLOGISTS	- LANDSCAPE ARCHITECTS - MECHANICAL ENGINEERS <u>1</u> MINING ENGINEERS - PHOTOGRAMMETRISTS - PLANNERS: URBAN/REGIONAL <u>1</u> SANITARY ENGINEERS <u>1</u> SOILS ENGINEERS <u>1</u> SPECIFICATION WRITERS	<u>1</u> STRUCTURAL ENGINEERS <u>4</u> SURVEYORS/RODMEN - TRAFFIC ENGINEERS <u>X</u> OTHER, <u>2</u> Geotechnical Drillers <u>2</u> Driller Helpers <u>4</u> Geotechnical Engineers <u>4</u> Laboratory Technicians
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36 TOTAL PERSONNEL

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 3

*RPEs other than Civil and Mining must provide supporting documentation that qualifies them to supervise and perform this type of work.

The TOTAL PERSONNEL number is for CTL Engineering, Inc. Morgantown, WV Office

TOTAL PERSONNEL for CTL Engineering, Inc. is 200, which includes the Morgantown Office.

10. HAS THIS JOINT-VENTURE WORKED TOGETHER BEFORE? YES NO

11. OUTSIDE KEY CONSULTANTS/SUB-CONSULTANTS ANTICIPATED TO BE USED. Attach "AML Consultant Confidential Qualification Questionnaire" for each if copy is not on file with AML.

NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No

12. A. Are your firm's personnel experienced in Abandoned Mine Lands Remediation/Mine Reclamation Engineering?

YES Description and Number of Projects: CTL Engineering has completed more than 800 AML related projects nationally and internationally. See attached "AML Past Project Experience" for some specific examples. CTL completes un excess of 100 testing projects each year.

NO

B. Is your firm experienced in Soil Analysis?

YES Description and Number of Projects: Our in-house laboratories perform all ASTM mechanical, organic and in-organic analyses for soils. Our labs are certified by WVDOH, OEPA and US Corps of Engineers.

NO

C. Is your firm experienced in hydrology and hydraulics?

YES Description and Number of Projects: Each of our site design and AML projects require hydrology & hydraulic evaluations. We estimate that annually, we complete more than 100 projects requiring hydrology design.

NO

D. Does your firm produce its own Aerial Photography and Develop Contour Mapping?

YES Description and Number of Projects:

NO However, we annually complete more than 25 projects requiring aerial photography & mapping. While we sub-contract the aerial photography, in-house we provide GPS, surveying and develop the contouring as needed. CTL deploys a drone to support contour mapping typicall for sites less than 10 acres.

E. Is your firm experienced in domestic waterline design? (Include any experience your firm has in evaluation of aquifer degradation as a result of mining.)

YES Description and Number of Projects: We have completed numerous waterline design projects and our in-house staff has more than 50 years of combined experience with aquifer degradation.

NO

F. Is your firm experienced in Acid Mine Drainage Evaluation and Abatement Design?

YES Description and Number of Projects: CTL has developed more than 20 active and passive treatment systems for AMD. More than 50 of our AML Design projects required some form of AMD evaluation and design.

NO

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.) Gallagher, Patrick E., PE President, Project Manager	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE: 39	YEARS OF AML RELATED DESIGN EXPERIENCE: 39	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 32

Brief Explanation of Responsibilities
 President of CTL Engineering of WV, Inc.; responsible for the overall administration of the Morgantown, WV office along with the management of the individual engineering projects. His administration and management responsibilities include marketing, proposal preparation, client contact, supervision of design personnel, scheduling, budget control, and report preparation. Projects successfully completed by Mr. Gallagher include: Geotechnical Investigations, Foundation Design Investigations, Dam Stability Analyses, Mine Subsidence Evaluations, Mineral Reserve Studies, Landslide Investigations, Mine Reclamation Designs, Failure Investigations, and Mining Permits.

EDUCATION (Degree, Year, Specialization)

B.S., 1975, Civil Engineering
 B.S., 1975, Equivalent, Geology

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

American Society of Civil Engineers
 Society of Mining Engineers of A.I.M.E.
 Triangle Fraternity of Engineers, Architects and Scientists
 International Society of Soil Mechanics and Foundation Engineers
 American Institute of Professional Geologists

REGISTRATION (Type, Year, State)

Registered Professional Engineer; 1983-West Virginia, 1984-Ohio, 1983-Maryland, 1993-Pennsylvania, 2006-Wyoming, 2006-North Carolina
 Certified Professional Geological Scientist - 1984
 Professional Surveyor, 1995-West Virginia

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.) Selfridge, Carl G. Department Head, Geotechnical Services	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE: 10	YEARS OF AML RELATED DESIGN EXPERIENCE: 10	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:

Brief Explanation of Responsibilities
 Department Head Geotechnical Engineering. Responsible for subsurface investigations, geotechnical reporting, foundation analysis & recommendations, program development for investigative and laboratory analysis.

EDUCATION (Degree, Year, Specialization)

Graduate Studies, 1996-1999, Civil Engineering (Geotechnical)
 B.S., 1996, Civil Engineering, Geotechnical and Structural
 A.S., 1994, Engineering Science
 A.A.S., 1991, Mechanical Technology - Design & Drafting

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Fellow of the American Society of Civil Engineers, The GEO-Institute, Timber Framers Guild, Construction Institute (ASCE)

REGISTRATION (Type, Year, State)

Engineering Intern (EI), 1996, New York
 Level II Drilling Inspector, 1999, PennDOT

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.) Huggins, Nathan Project Manager	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE: 10	YEARS OF AML RELATED DESIGN EXPERIENCE: 10	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 5
Brief Explanation of Responsibilities Mr. Huggins is responsible for Reclamation Design, Drafting Hydrology, Quantity Calculations, Stability Analysis, Residential Development, Oil and Gas Development, Surveying, Subsidence Surveys, Pre-Blast Surveys, Acid Base Accounts, Groundwater Inventory. PC Software includes Hydrologic TR-20, TR-55, Excel, Word, AutoCADD Land.			
EDUCATION (Degree, Year, Specialization) B.S., 2000 Architecture			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State)	

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.) Foreman, Gregory P.E.	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE: 10	YEARS OF AML RELATED DESIGN EXPERIENCE: 22	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 22
Brief Explanation of Responsibilities Mr. Foreman serves as Project Manager and Design Engineer for various civil site design projects including reclamation, water supply, sanitary design for public and private projects. Design services provided include site grading, potable water, sanitary sewer, storm sewer, pedestrian walkways, vehicular thoroughfares, preparation of permits, project specifications, plans and engineering calculations.			
EDUCATION (Degree, Year, Specialization) A.S, Fairmont State, 1989, Drafting & Design A.S., Fairmont State, 1989, Mechanical B.S., Fairmont, 1989, Civil Engineering Technology			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State) Registered Professional Engineer, 1999, WV (no. ██████████)	

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.) Daniel Barton P.E.	YEARS OF EXPERIENCE		
YEARS OF AML DESIGN EXPERIENCE: 20	YEARS OF AML RELATED DESIGN EXPERIENCE: 20	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 20	
Brief Explanation of Responsibilities Mr. Barton will sever as project oversight and review. Mr. Barton's experience with projects involving detailed hydraulics and hydrology computations and/or modeling includes: Laurel Hill River Conservation Plan, Pennsylvania; Quemahoning Water Supply Project Feasibility Study, Pennsylvania; Columbia Dam Rehabilitation, South Carolina; Coxes Creek Act 167 Storm Water Plan, Pennsylvania; Border Dam Rehabilitation, Pennsylvania.; Lincoln Water System Rehabilitation, Pennsylvania; Youghiogheny Hydroelectric Project Design, Pennsylvania; Susquehanna Nuclear Power Plant Flooding Design Basis Reevaluation, Pennsylvania			
EDUCATION (Degree, Year, Specialization) M.S Civil Engineering B.A Engineering Services			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State) Registered Professional Engineer, WV and PA	

14. PROVIDE A LIST OF SOFTWARE AND EQUIPMENT AVAILABLE IN THE PRIMARY OFFICE WHICH WILL BE USED TO COMPLETE AML DESIGN SERVICES.

OFFICE EQUIPMENT

3 HP Color Plotters
HP Color Scanner
Duplicating equipment, copiers, blueprinting, laser printers, etc.
Facsimile Machine

DESIGN SOFTWARE

Windows XP & 2000 based operating systems

Microsoft Office 2000 & 2002 is used for word processing, spreadsheet creation, data processing, and presentation creation. Alternative software including Corel Suite is available, if necessary Project designs and specifications are produced in our Computer Aided Drafting and Design (CADD) section using all versions of AutoCAD including Release 2018.

Hydrogeologic Studies

MODFLO
MODPATH
SURFER
CAPZONE
GWPATH
SKUGIS
PHREEQCI
WATEQ4F
Groundwater for Windows

Civil Engineering Software

Civil 3D 2018(AutoCADD) - 13 Seats
Profiling
Civilsoft
TR-20 & TR-55
SEDCAD
HEC 1 & 2
HEC-RAS
Arc GIS
ArcPAD
Carson Software

Geotechnical

GINT
STABL6
SHAFT
WSPRO
Various Bridge, Pavement, Pile and Foundation Software

SURVEY EQUIPMENT

- 8 - Trimble GPS Systems - 6-R8 Receivers & 2- R10 Receiver
- 6 Total Stations (1- Robotic)
- DJI Inspire II Drone
- NAK Micrometer Level System & Direct Levels
- 4X4 Vehicles, including ATV for off-road use
- 2-Way Radios

SUBSURFACE INVESTIGATION EQUIPMENT

- 3 - CME 75 Drilling Rigs, 4-Wheel Drive Truck Mounted
- 2 - CME 75 HD Drilling Rigs, 2-Wheel Drive Truck Mounted
- 1 - CME 55 HD Drilling Rig, All-Terrain Mounted
- 1 - CME 45 Drill Rig, 2-Wheel Drive Truck Mounted
- 1 - CME 45 Drill Rig, 2-Wheel Drive Skid Mounted
- 1 Simco 4000 Track Rig
- 4-Wheel Drive Support Vehicles
- Portable barges for water borne drilling (including supply boats w/outboard motors)
- In-situ permeability apparatus
- Single or double ring field infiltrimeters for hydraulic conductivity testing
- Down hole temperature gauges
- Color Borehole Camera with 300 foot range
- Ground Penetrating Radar Undisturbed shelby tube sampling devices
- Standard penetration testing equipment (1", 2", 3" split spoons)
- Settlement probes
- Tripod portable drilling equipment for interior drilling with 7 feet of clearance
- CBR equipment
- Hand Augers
- Solid flight augers - 4" O.D.
- Hollow stem augers - 33", 43", 63" 83" I.D.
- Rotary drilling capability up to 12" O.D.
- Hydro Punch - In-situ groundwater monitoring
- Conventional and wireline coring capabilities - (1", 2", 3", & 4")
- Soil-gas survey equipment
- Pump testing equipment
- Decontamination Equipment - Steam cleaners, drums, generators, etc.
- Electronic Data Loggers
- Field Sampling equipment for soil, water and groundwater
- Nuclear Densometer - Soil Compaction
- PID, FID, CGI and various field monitoring equipment
- Groundwater and Soil Remediation Equipment
- Mobile activated carbon system
- Air and chemical stripping of soils and water

15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
WVU Aquatic Center	WVU	Civil Site Design, Surveying, Geotechnical Engineering	\$42,000,000	50%
WVUH Drug Rehab Center	WVUH	Civil Site Design, Surveying, Geotechnical Engineering	\$30,000,000	35%
Multiple Properties Medical Facilities Morgantown, WV	WVU Hospitals 1 Medical Center Drive Morgantown, WV 26506	Surveying and Site Desing	\$60,000,000	20%-70%
State Route 2 Mine Voids Geotech & Grout Design Near Toledo, OH	Ohio Dept. of Highways, Dist.2 317 East Poe Road Bowling Green, OH 43402	Geotechnical Engineering	\$20,000,000	100%
Gateway Development Commercial Development Morgantown, WV	MAGCS, LLC 308 Cheat Road Morgantown, WV 26508	Civil Site Design, Surveying, Geotechnical Engineering	\$15,000,000	90%
Eclipse Resources	2121 Old Gatesburg Road, Suite 110 State College, PA	Civil Site Design, Surveying, Geotechnical Engineering	\$4,000,000	%10
TOTAL NUMBER OF PROJECTS: 4	TOTAL ESTIMATED CONSTRUCTION COSTS: +\$165,000,000			

16. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS SERVING AS A SUB-CONSULTANT TO OTHERS

PROJECT NAME, TYPE AND LOCATION	NATURE OF FIRMS RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONSTRUCTION COST	
				ENTIRE PROJECT	YOUR FIRMS RESPONSIBILITY
Fremont City Schools 4 elementary schools	Civil Site Design and Surveying	SSOE Group, 1001 Madison Ave. Toledo, Ohio	2020	\$52,000,000	\$400,000
Cacapon Resort	Civil Site Design and Surveying	Paradigm Architecture 2223 Cheat Rd. Morgantown, WV	2019	\$25,000,000	\$140,000
Sunnyside TIF Project	Geotechnical Engineering and Surveying	Herbert, Rowland and Grubic, Inc 829 Fairmont Road Morgantown, WV	2019	\$6,000,000	\$50,000
Frostburg State University Dorm, Design Build, Frostburg, MD	Mine Grout Stabilization and Geotechnical Recommendations	PJ Dick Corporation Pittsburgh, PA	2018	\$28,000,000	\$1,000,000
Mon Health Center Medical Facilities	Civil Site Desing, Surveying, Environmental and Geotechnical	Mon Health 1200J.D. Anderson Drive Morgantown, WV	2018	\$20,000,000	\$40,000

17. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM WAS THE DESIGNATED ENGINEER OF RECORD

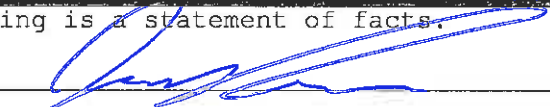
PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
I-81 Widening Martinsburg, WV	WV DOT	\$33,000,000	2013	YES
Maple Drive Extension	Mon General Hospital	\$1,800,000	2015	YES
Shinn's Run Portals & AMD, AML Project, Harrison County, WV	WV DEP- AML 601 57 th Street SE Charleston, WV 25304	\$100,000	2013	YES
Southern WV Drilling	Department of Environmental Protection Office of the AML	\$650,000	2017-2018	YES
University Park	Glenmark Holding, LLC	\$20,000,000	2013	YES
Harrison Power Station Landfill Const. Services Shinnston, WV	FirstEnergy Corporation 800 Cabin Hill Drive Greensburg, PA 15601	\$1,100,000	2015	YES
Multiple Natural Gas Pipelines WV & Eastern Ohio	Antero Resources 1625 17 th Street Denver, CO 80202	\$500,000,000	2013	YES

18. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS BEEN A SUB-CONSULTANT TO OTHER FIRMS (INDICATE PHASE OF WORK FOR WHICH YOUR FIRM WAS RESPONSIBLE)

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST OF YOUR FIRM'S PORTION	YEAR	CONSTRUCTED (YES OR NO)	FIRM ASSOCIATED WITH
Mark West Site Processig Plant Nobel County, OH	West Virginia DOT 1900 Kanawha Blvd. Charleston, WV 25305	\$396,000 Geotechnical Engineering & Construction Observation	2015	YES	Beaver Excavating PO Box 6059 Canton, OH 44706
I-79 New Exit 142	WVDOT	\$15,000,000 (Geotechnical Engineering, Construction Observation & Testing)	2016	YES	Mountaineer Contracting
University Place Student Housing Morgantown, WV	West Virginia Campus Housing, LLC PO Box 4034 Morgantown, WV 26504	\$100,000 (Civil Site Design, Survey, Geotechnical, Environmental)	2013	YES	Paradigm Construction

19. Use this space to provide any additional information or description of resources supporting your firm's qualifications to perform work for the West Virginia Abandoned Mine Lands Program.
For the past 25 years, CTL has successfully designed more than 200 AML projects. We have worked nationally and internationally on a variety of AML problem sites. We have developed unique solutions that have been applied to site development, AMD Treatment, Mine Subsidence Abatement, Mine Fires and Highwall Elimination. Routinely, CTL is involved with highwall and refuse pile stabilization and extinguishment.

20. The foregoing is a statement of facts.

Signature:  Title: Business Development Date: 9/12/2018
 Printed Name: Joseph Stanley

NOTE: THIS DOCUMENT WILL BECOME VOID AFTER DECEMBER 31 IN CALENDAR YEAR OF DATE HEREON.

PENINSULA HIGHWALLS (WV AML '09)	C	Profile	X	X		X			X		X					X	MP	MP		P		P	
ST. CLAIR PORTALS (WV AML '09)	C	Profile	X	X	X	X					X				X	X	MP	MP		P		P	
CHEAT NECK LANDSLIDE (WV AML '09)	C	Profile			X	X					X				X		MP	MP		P		P	
FARMINGTON UMC (WV DEP EMER. '09)	C								X		X						MP	MP				P	
MORNINGSIDE BAPTIST (WV DEP EMER. '09)	C								X		X						MP	MP				P	
COLLINS MINING (ODNR FOR. '09)	C		X								X						MP	MP		P			
FAIRVIEW WATER FEASIBILITY(WV AML '09)	C											X					MP	MP					
AARON'S RUN (MD AML '09)	C	Profile	X			X					X	X		X	X		MP	MP		P			
ECCLES SUBSIDENCE (WV AML '08)	C								X		X					X	MP	MP				P	
McARTHUR SUBSIDENCE (WV AML '08)	C								X							X	MP	MP				P	
TIOGA WATER FEASIBILITY (WV AML '08)	C											X					MP	MP					
McCOURT LANDSLIDE(ODNR FOR. '08)	C	Profile	X			X					X					X	MP	MP		P		P	
JONES TRUCKING (ODNR FOR. '08)	C		X								X						MP	MP		P			
MILLER MINING (ODNR FOR. '08)	C					X					X	X					MP	MP		P			
ZILMAN CLOSURE (MD AML '08)	C			X	X						X						MP	MP		P			
CALDONIA HILL SLOPE STABILITY (MD AML '08)	C		X													X	MP	MP					
WEST VIRGINIA BRIM (2005 - 2012) 42 Projects	C								X							X	MP	MP				P	P
OMSIUA (2005 - 2010) 47 Projects	C								X							X	MP	MP				P	P
(2005 - 2008) 20 Additional AML Projects for WV, MD, OH, PA	C		X	X	X				X		X	X	X			X	MP	MP				P	P

* List whether project experience is corporate or personnel based or both.

** 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.

Attachment "C"



SECTION 5 ADDITIONAL INFORMATION

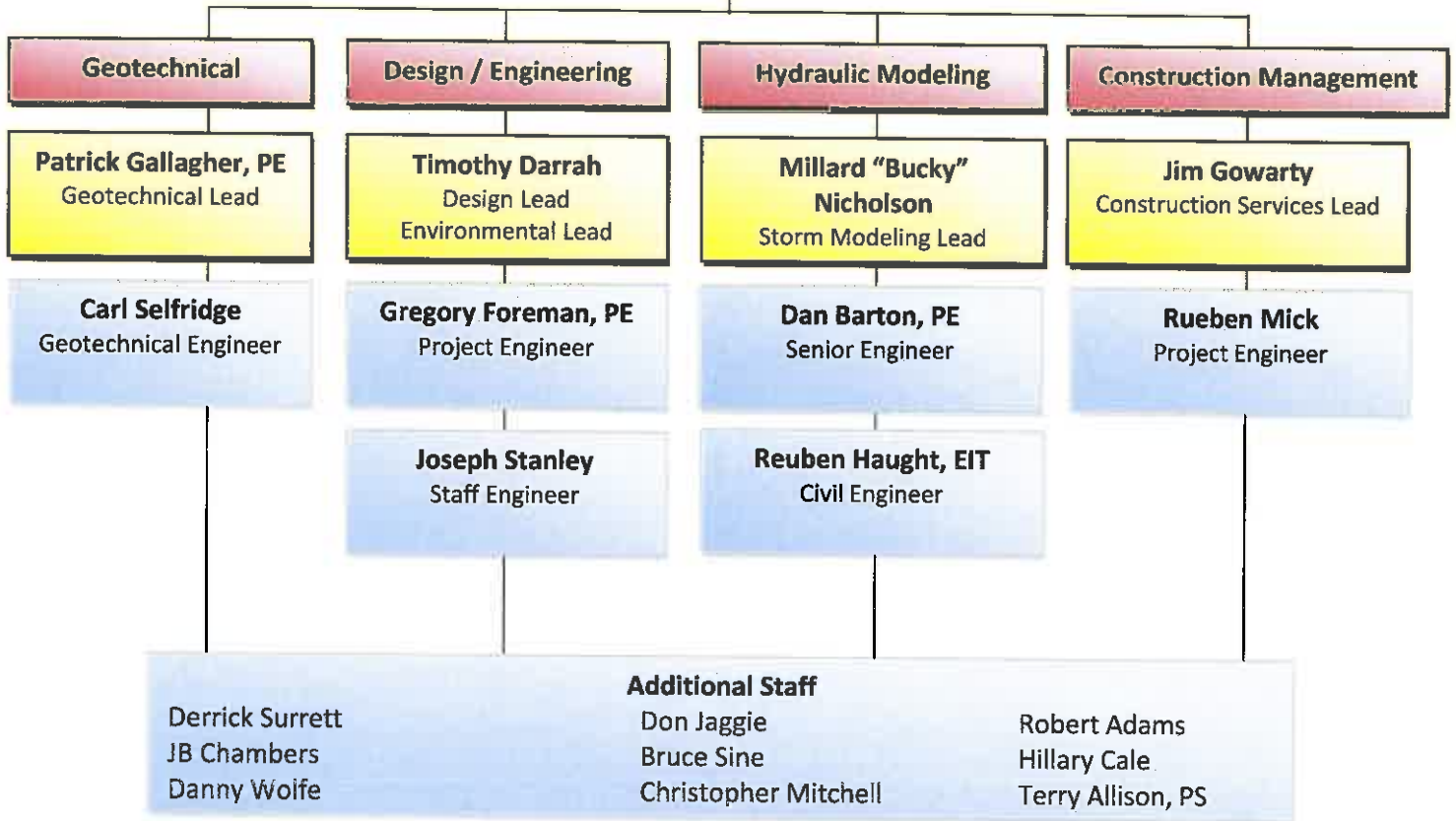
CTL TEAM ORGANIZATION

west virginia



Timothy Darrah
Project Manager and
Client Point of Contact

Patrick Gallagher, PE, PS
Engineer of Record





Personnel Matrix

Name	Education	Years of Experience	Subsidence	Highwalls	Refuse Piles	AMD	Mine Openings	Stream Design / Restorations	Construction Docs / Bidding
Timothy Darrah *	B.S. Civil Engineering Technology	29	X	X	X	X	X	X	X
Pat Gallagher PE, PS*	B.S. Civil Engineering /Minor in Geology	42	X	X	X	X	X	X	X
Gregory Foreman PE*	B.S. Civil Engineering Technology	28	X	X	X			X	X
Carl Selfridge *	B.S. Civil Engineering	21	X	X	X		X		X
Millard "Bucky" Nicholson *	B.S. Civil Engineering Technology	17	X	X	X	X	X	X	X
Jim Gowarty *	B.S. Civil Engineering Technology	28	X	X	X		X	X	X
Joseph Stanley*	A.S. Drafting / Design	17	X	X	X	X	X	X	X
Reuben Haught EIT *	B.S. Civil Engineering Technology	6			X				X
Dan Barton PE*	M.S. Civil Engineering /B.A. Engineering Sciences	32		X	X	X		X	X
Rueben Mick *	B.S. Engineering Technology	42	X	X	X	X	X	X	X
J.B. Chambers *	Garrett CCC	27		X	X				
Terry Allison PS*	A.A.S. Surveying and Construction	35	X	X					X
Derrick Surrent*	B.A. Environmental Studies	12		X	X				
Danny Wolfe	MTECH	23		X	X	X			
Christopher Mitchell	B.S. Landscape Architecture	4		X					X
Bruce Sine	A.A.S. Graphic Art	18		X	X	X			
Hillary Cale	Civil 3D Advanced Training	13	X			X	X		X
Don Jaggie	WV DOT Certified Technician	17		X	X				
Robert Adams	Salem College	25		X	X			X	X

Key Personnel and Additional Staff

Key Personnel shown in **Bold**

* - indicates resume is included

CTL Team Key Personnel / Experience

Patrick E. Gallagher, PE, CPGS | President

Education: B.S. Civil Engineering, Minor in Geology

Summary: Mr. Gallagher will serve as the geotechnical lead for the project. Projects successfully completed under Mr. Gallagher's direction include: Civil Site Design, Foundation Design, Stormwater Management, Waste Water Design, Roadway Design, Parking Lot Design, Geotechnical Investigations & Design, Site Stability Analyses, Mine Subsidence Evaluations, Failure Investigations and Environmental Investigations and Expert Witness Testimony. Prior to joining CTL Engineering, Mr. Gallagher was the chief of the Abandoned Mine Reclamation Program for the State of Maryland, Department of Natural Resources, and Bureau of Mines. In addition, he was also responsible for overall engineering/geologic support to the Maryland Bureau of Mines Program. His career began in Pittsburgh as a project geotechnical engineer with Orbital Engineering.



Relevant Project Experience

- ODOT 11-16 – Mine Voids Mitigation SR 2, Ottawa County, OH
- Step&J 11-12 – Eastern/Patriot Kopperston Refuse Impoundment, Wyoming County, WV
- LP Mineral 11-17 – Overhead Conveyor Yearly Inspection, Monongalia County, WV
- MDE 2012 – Douglas Avenue Landslide Repair Project – Task Order #9, Allegany County, MD
- WV DEP 12-13 – Fairmont (Jackson Addition) Subsidence Project (DEP 15594), Marion County, WV
- CONSOL 2013 – Annual Certification – Loveridge, Marion County, WV
- Mepco 13-14 – Seal Certification – Prime No. 1 Mine, Monongalia County, WV
- MDE 2014 – Shaft Firehall (TO#22), Frostburg, MD
- Island Creek 2015 – North Branch Annual Certifications, Grant County, WV
- MDE 14-15 – Aarons Run, Garrett County, MD
- AECOM 14-16 – I-79 Interchange Mine Subsidence and Grout Stabilization, Monongalia County, WV
- Beaver 2015 – Cowgill Waterline – Stability Analysis, Noble County, OH
- MDE 15-16 – Upper Georges Creek Stream Sealing Project Acid Mine Drainage, Allegany County, MD

Tim Darrah | Civil/Site and Surveying Department Manager

Education: B.S. Civil Engineering

Summary: Mr. Darrah will serve as the project manager for CTL. Mr. Darrah is presently responsible for department management for municipal engineering, civil site design and surveying projects including topographic, property and construction layout. Mr. Darrah also serves as project manager on various types of civil engineering projects including water, sewer and stormwater designs as well as residential, commercial developments and reclamation design projects. Office work includes site designs, hydrology calculations, quantity calculations, and various other forms of engineering related duties.



Relevant Project Experience

- Morgantown Anderson Portals & Highwall – Abandoned Mine Land Reclamation Design, Morgantown, West Virginia
- Hopewell Church Refuse and Acid Mine Drainage – Abandoned Mine Lands, Preston County, West Virginia
- Fairmont (Jackson Addition) Subsidence Project – Abandoned Mine Land Reclamation, Marion County, West Virginia
- Shinns Run Portals & Acid Mine Drainage – Abandoned Mine Lands Reclamation, Harrison County, West Virginia
- Ream Refuse Piles – Abandoned Mine Lands Reclamation, McDowell County, West Virginia
- Cheat Neck (Lenhart) Landslide, Monongalia County, West Virginia
- St. Clair Portals – Abandoned Mine Lands Reclamation, Monongalia County, West Virginia
- Morning Star Baptist Church Subsidence, Marion County, West Virginia
- Fairmont United Methodist Church-Subsidence Investigation & Mitigation, Fairmont, West Virginia
- Eccles and MacArthur Subsidence, Raleigh County, West Virginia
- Oakland Public Service District - Feasibility Study, Hancock County, West Virginia
- Peninsula Highwalls – Abandoned Mine Lands Reclamation, Monongalia County, West Virginia

Millard "Bucky" Nicholson | Civil Engineer**Education:** B.S. Civil Engineering

Summary: Mr. Nicholson will serve as the Stormwater Modeling Lead. Mr. Millard L. Nicholson Jr. is a Staff Engineer, Project Manager, and CAD Designer in the Morgantown, West Virginia office of CTL Engineering, Inc. His responsibilities include assisting in the planning and design of civil site design projects involving land planning and site development aspects, stormwater for MS4 communities and permitting. He is proficient in AutoCAD Civil 3D, HEC-RAS, TR-55, Hydraflow Hydrographs, Microsoft Word, and Microsoft Excel. His projects include commercial and residential properties, mine and energy sites, and, also, state, county, and local roads. Mr. Nicholson expertise in stormwater and hydraulic modeling are crucial for any project CTL completes. All site development designs are coordinated through Bucky and rely on his calculations and analyses for site specific specifications. Bucky has completed numerous studies and analyses in support of modification to FEMA Flood Maps via LOMR (Letter of Map Revision) process. He has modeled several sites using HEC-RAS to determine the actual floodplain limits. Bucky also is our lead for green design in stormwater, such as biocells and rain gardens. Ditch calculations and drainage areas are other examples of Bucky's experience.

**Relevant Project Experience**

- LOMR and FEMA permits various locations in West Virginia
- Site Development stormwater design, various locations in West Virginia
- Hydraulic Modeling for Bridge Analysis, Monongalia County, West Virginia
- Fairmont Subsidence – Abandoned Mine Land Reclamation, Marion County, West Virginia
- Morgantown Anderson Highwalls – Abandoned Mine Land Reclamation Design, Monongalia County, West Virginia
- Shinn's Run Portals – Abandoned Mine Land Reclamation & Portal Closure, Harrison County, West Virginia
- Williams Refuse Pile – Land Reclamation, Harrison County, West Virginia

James P. Gowarty | Construction Services Manager**Education:** B.S. Civil Engineering, 1990; A.S. Mechanical Engineering, 1990

Summary: Mr. Gowarty will serve as the Construction Services Lead for the Project. As the Construction Services Manager for CTL Engineering of West Virginia Inc., Mr. Gowarty is responsible for supervising field and laboratory technicians. He is also responsible for report writing for field and laboratory testing, project management, client contact, estimating, proposals and invoicing for Construction Services Department. Mr. Gowarty's experience also includes surveying, pre-mining and pre-blast surveys, field supervision of drilling crews, Phase I Environmental Site Assessments and radiation safety officer and corporate safety officer. In addition, Mr. Gowarty is the Construction Materials Testing



Supervisor, providing concrete, compaction, and aggregate testing and has over twenty (20) years of experience with Nuclear Gauge Operation.

Mr. Gowarty has been CTL's Corporate Safety Officer since the Fall of 2008. Mr. Gowarty is CTL's USNRC Safety Officer.

Relevant Project Experience

- Water Treatment Plant Correctional Action Design-Geotechnical & Construction Services. Marion County, W.V.
- Fairmont Airport-Variou Services. Fairmont, W.V.
- Hazelton Federal Correctional Institute-Variou Services. Hazelton, W.V.
- U.S. Department of Energy Facility-Geotechnical, Construction, Surveying Services. Morgantown, W.V.
- I-81 Martinsburg to Marlow Interchange-Design Build. Martinsburg, W.V.
- Mileground Roundabout-Construction Services. Morgantown, W.V.
- Harrison Power Station CCB Landfill Phase V Step III, Harrison County, West Virginia
- Leer Mine Complex, Taylor County, West Virginia
- Tunnel Ridge Coal, Ohio County, West Virginia
- Refuse Testing, Ohio County, West Virginia
- Longview Conveyor, Monongalia County, West Virginia

Carl Selfridge | Geotechnical Engineer

Education: B.S. Civil Engineering Technology

Summary: Mr. Selfridge will serve as a geotechnical engineer and provide geotechnical oversight and review for the project. Annually manages 100+ various geotechnical projects including; education, transportation, commercial development and a variety of public and private clients. Mr. Selfridge is responsible for directing all aspects of the Geotechnical Engineering Department for CTL Engineering of West Virginia, Inc.

This includes the management of field drilling activities, field classification of soil and rock, field and laboratory safety procedures, the assignment of a laboratory testing program, and performing geotechnical evaluations. Engineering evaluations include foundation recommendations, settlement analysis, slope stability analysis, earth pressure coefficients and report preparation.

**Relevant Project Experience**

- Eccles and MacArtur Subsidence-Subsidence Investigation & Mitigation. Raleigh County, W.V.
- Shinns Run Portals & AMD-AML Reclamation & Geotechnical Services. Harrison County, W.V.
- Tunnel Ridge Slurry Cell A-Piezometer Installations & Geotechnical Services. Ohio County, W.V.
- Pine Creek: Omar Landfill-Geotechnical Services. Logan County, W.V.
- WV State- wide Landfill-Geotechnical Services.
- Buzzard Pond Dam-Geotechnical Services. Marshall County, W.V.

Gregory Foreman, P.E. | Civil & Municipal Engineer

Education: B.S. Civil Engineering

Professional Registrations: Professional Engineer, WV, PA

Summary: Mr. Foreman will be the Design Lead for the project. Mr. Foreman has been with CTL Engineering for more than 10 years and has served as Project Manager and Design Engineer for a multitude of design projects for municipal, commercial, and private developer clients. He has over 25 years of experience with consulting engineering organizations. Prior to joining CTL, Mr. Foreman's career involved project engineering roles for Horner Brothers Engineers and Greenhome & O'Mara. Mr. Foreman's experience includes roadways and streets including design, permitting, bid package development, and construction oversight. Representative experience includes:

**Relevant Project Experience**

- Fairview Feasibility Study – Abandoned Mine Lands Feasibility Study, Marion County, West Virginia
- Craigsville/Tioga Water Well Hydrologic Study, Nicholas County, West Virginia
- Feasibility Study for Oakland Public Service District – Abandoned Mine Lands Feasibility Study, Hancock County, West Virginia
- Morgantown Anderson Portals & Highwall – Abandoned Mine Lands Reclamation Design, Morgantown, West Virginia
- Pee Wee Hill Potable Water Design – Maryland Department of Environmental, Maryland
- Palisades Place-Sewage Collection - Treatment and Disposal, Morgantown, West Virginia
- Fairmont Water Treatment Plant, Fairmont, West Virginia

Daniel Barton, P.E. | Senior Engineering**Education:** M.S. Civil Engineering, B.A. Engineering Sciences**Professional Registrations:** Professional Engineer, Pennsylvania

Summary: Mr. Barton will provide senior engineering in support of stormwater modeling for this contract including model setup and peer review. Dan is a senior engineer with over 30 years of experience. His water resources engineering experience involves broad spectrum including water and sewer system rehabilitation and expansion, cooling water system design, storm water planning, flooding analyses for inland and coastal sites, dams and hydroelectric facility design, and river conservation planning. His experience includes graduate-research at Carnegie Mellon University developing computer simulation models to study stream flows in the Monongahela River Basin. He was appointed by the Governor of Pennsylvania to serve on the Ohio River Basin Regional Water Resources Committee in support of the State Water Plan.

**Relevant Project Experience**

Mr. Barton's experience with projects involving detailed hydraulics and hydrology computations and/or modeling includes: Laurel Hill River Conservation Plan, Pennsylvania; Quemahoning Water Supply Project Feasibility Study, Pennsylvania; Columbia Dam Rehabilitation, South Carolina; Coxes Creek Act 167 Storm Water Plan, Pennsylvania; Border Dam Rehabilitation, Pennsylvania.; Lincoln Water System Rehabilitation, Pennsylvania; Youghiogheny Hydroelectric Project Design, Pennsylvania; Susquehanna Nuclear Power Plant Flooding Design Basis Reevaluation, Pennsylvania.

Ruben Mick | Civil Engineer**Education:** B.S. Civil Engineering Technology

Summary of Experience: As a Project Manager, Mr. Mick's responsibilities include structural and foundation evaluations and design, retaining wall design, new construction inspections, mine subsidence investigations, flood investigations, impoundment stability inspections, civil site design project management, technical report and specification preparation and letter writing.

Relevant Project Experience:

Mr. Mick has performed quality control inspection services for Morgantown Utility Board's (MUB) major expansion of the Cheat Lake Wastewater Treatment Plant System and Pump Station, along with new water tank installation, gravity, force main sewage and main water line extensions from Granville to the Chaplin Hill Business Park in addition to sanitary and water line extensions for the Northpointe Townhouse Development located in Morgantown, WV. Performed energy efficiency upgrade and structural modifications to the Star City Town Hall Building Complex.

**Joseph Stanley | Civil Engineer****Education:** A.S. Drafting and Design

Summary of Experience: Mr. Joe Stanley is a Staff Engineer, Project Manager, and CAD Designer in the Morgantown, West Virginia office of CTL Engineering, Inc. His responsibilities include assisting in the planning and design of civil site design projects involving land planning and site development aspects. His projects vary from commercial and residential properties, mine and energy sites, and also includes state, county, and local roads.

Relevant Project Experience

- Fairmont Subsidence – Abandoned Mine Land Reclamation, Marion County, West Virginia
- Morgantown Anderson Highwalls – Abandoned Mine Land Reclamation Design, Monongalia County, West Virginia
- Shinns Run Portals – Abandoned Mine Land Reclamation & Portal Closure, Harrison County, West Virginia
- Hopewell Church Refuse – Abandoned Mine Drainage, Preston County, West Virginia
- Peninsula Highwalls – Abandoned Mine Land Reclamation, Monongalia County, West Virginia
- Cheat Neck Landslide, Monongalia County, West Virginia



Reuben Haught, E.I. | Civil Engineer

Education: B.S. Civil Engineering Technology

Summary: Mr. Haught will provide engineering support to stormwater modeling and design for the project. Mr. Haught is a Staff Engineer and CAD Designer whose responsibilities include site design, site grading, stormwater design in and out of MS4 communities, permitting, retaining pond design, and impoundment stability inspections. He is proficient in AutoCAD Civil 3D, Hydraflow Hydrographs, Microsoft Word, and Microsoft Excel.

**Relevant Project Experience**

WVU Track and Aquatic Center in Morgantown, WV: Site Layout, Site Grading, Stormwater Design, Erosion and Sediment Permitting, Retaining Pond Design.

WVU Medicine Clinic in Fairmont, WV: Site Grading, Stormwater Design, Erosion and Sediment Permitting, Retaining Pond Design

Mon General Outpatient Facility in Fairmont, WV: Site Grading, Stormwater Design, Erosion and Sediment Permitting, Retaining Pond Design

Terrence Allison PS | Survey Lead

Education: A.A.S. Surveying & Construction Technology, A.A.S. Computer Technology

Registration: Licensed Surveyor in West Virginia and Ohio.

Summary: Mr. Allison has over 35 years of all types of surveying in Ohio, around the country and around the world. He is responsible for the supervision, coordination, reporting and consultation of land surveying and construction surveying related services. These responsibilities include reviewing of the scope of work, project plans and specifications prior to the start of work, assigning appropriate field crews and cad personnel to projects, reviewing all field and office work for the project and delivering the final plats, deeds and other surveying products requested. Mr. Allison has been the project manager on a variety of surveying projects that include, but are not limited to boundary and topographic surveys, municipal infrastructure and park surveys, oil and gas well plats and design surveys, FEMA LIDAR check surveys, cell towers, subdivisions, site developments, roads, bridges, sewers and other utilities, flood control studies, and construction layout for major buildings, roads, and bridges.

**J.B. Chambers | Surveyor**

Education: Garrett County Community College

Summary: Mr. Chambers presently serves as a Surveying Supervisor and Party Chief for the Morgantown office. He is responsible for working directly with the Department Manager to coordinate projects and schedule personnel necessary to perform the required scope of services. Typical projects successfully completed by Mr. Chambers include a variety of surveying services such as; ALTA and ARSM surveys, utility locates, oil and gas line surveying, topographic, boundary, construction, site layout, mining, route, flood plan, as well as wetland delineation and control

**Derrick Surret | Surveyor**

Education: B.S. Music Industry Studies, Minor in Business

Summary: As a Surveying Crew Chief, Mr. Surret plays a vital role within the day to day operations of CTL's surveying department. His experience stretches across all realms of private industry and government related projects. Most recently, Mr. Surret's responsibilities have included leading surveying crews to accommodate the needs of our oil and gas clients in West Virginia and Ohio. In his 8+ years of experience, Mr. Surret has displayed expertise in completing ALTA boundary surveys, topographic surveys, right of ways, and construction layout/stakeout surveys.



AML / Mine Related-Past Performance Matrix

Name	Location	Subsidence	Highwalls	Refuse Piles	AMD	Mine Openings	Stream Design / Restorations	Construction Docs / Bidding
Anderson Highwall	Monongalia County, WV		X			X		X
Peninsula Highwall	Monongalia County, WV		X			X		X
St. Clair Portals	Monongalia County, WV		X	X	X	X	X	X
Aaron's Run	Garrett County, MD		I.	II.	X		X	X
George's Creek	Garrett County, MD		III.	IV.			X	X
Shinn's Run Portals	Harrison County, WV		VII.	VIII.	X	X		X
Williams Refuse Pile	Harrison County, WV		IX.	X	X			X
Maryland Deep Mine Closures	Allegheny & Garrett County, MD		X.	XI.	XII.	X		X
Hopewell Church & AMD, WVDEP	Preston County, WV		X	X	X	X		X
Fairmont Subsidence	Fairmont, WV	X						X
Blackwater River AMD	Tucker County, WV		XIII.	XIV.	X			X
Taylor Creek Impoundment	Clay County, WV		XV.	X			X	X
Thomas Subsidence	Thomas, WV	X						X
Red Hollow Refuse Pile	Mc Comas, WV		XVI.	X				X
Alderson Branch Refuse Pile	Raleigh County, WV		XVII.	X				X
General Clay	Medina County, Ohio		X					X
Zerger Quarry	Noble County, Ohio		X					X



Past Project Experience

Project: Anderson Highwall

eClient: WVDEP AML

Contact: AML Division (Bridgeport Office)

Phone: (304) 926-0499

Location: Monongalia County, West Virginia

Project Description: The site consisted of dangerous highwalls, seven or more open or partially open portals and a dangerous scrap yard with potentially dangerous materials. CTL provided surveying, geotechnical investigation, civil design and construction bidding documents.



Project: Peninsula Highwall

Client: WVDEP AML

Contact: AML Division (Bridgeport Office)

Phone: (304) 926-0499

Location: Monongalia County, West Virginia

Project Description: This site contained 1,800 LF of vertical to sloughed highwalls 15 to 25 feet high, 7 partially or totally collapsed mine portals, 1 open mine portal, subsidence depressions behind the portals and water present at or flowing from the portals. CTL Engineering of West Virginia, Inc. was retained to provide the design for the access road into the site, wet seal 2 portals, regrade face of 2 portals, riprap channel and additional channel to carry water off site, backfill of highwalls and subsidence areas, restoration of golf path asphalt, and conditioning and revegetation of all disturbed areas.



Project: St. Clair Portals

Client: WVDEP AML

Contact: AML Division (Bridgeport Office)

Phone: (304) 926-0499

Location: Monongalia County, West Virginia

Project Description: The site consisted of coal refuse, acid mine drainage with impounded water, collapsed mine portals and highwalls. 17 portals were found along the highwall bench. Three impoundments of approximately 70,000 sq. ft. had water flowing at 300 gpm with a pH value of 3.1 and iron >10 mg/l. A 35' to 45' high refuse pile was in the middle of the site as well as scattered refuse throughout the site.



CTL Engineering of West Virginia, Inc. was retained to provide the design for excavation and wet seal of at least 17 mine portals, dewater three impoundments, 2000 LF of stream reconstruction, regrade and cover of coal refuse and spoil areas on mine bench, drainage control channels to carry water off site. CTL was also responsible for the backfill of highwalls using spoil material to original contour and conditioning and revegetation of all disturbed areas.

Project: Aaron's Run AMD Project
Client: Maryland Department of Environment – AML Division
Contact: Mike Garner
Phone: (301) 689-1440
Location: Garrett County, Maryland

Project Description: CTL Engineering of West Virginia, Inc. was retained to provide the design for multiple AMD treatment systems, 2 SAP cells, slurry doser, settling ponds, and natural wetlands. CTL also provided full site grading plans & drainage controls, access road & highway rated bridge, all state & federal permitting, and construction specifications and drawings.



Project: Upper Georges Creek Stream Sealing Project
Client: Maryland Department of Environment – AML Division
Contact: Tim Miller
Phone: (301) 689-1440

Location: Garrett County, Maryland
Project Description: CTL Engineering of West Virginia Inc. was retained to perform geologic and hydrologic assessments of the Upper Georges Creek Watershed to determine the extent and amount of stream flow lost to underground mines. CTL was responsible for conducting cooperative meetings with several stakeholders, reviewing existing reports and data on file at the AMLD office and based on available data along with possibly field measurements or drilling, develop plans to monitor streams to locate stream water loss zones. CTL then performed stream flow measurements within the study area to locate the areas of most significant water loss. Also, assessments to each tributary was completed as a part of the study. Upon completion of the study, CTL provided remediation options for sealing the streams.



Project: Shinns Run
Client: WVDEP AML
Contact: AML Division (Bridgeport Office)
Phone: (304) 926-0499
Location: Harrison County, West Virginia

Project Description: CTL Engineering provided surveying, reclamation design and subsurface investigations for this Abandoned Mine Lands and Reclamation project. The surveying was completed in order to establish the areas that will be reclaimed and to locate utilities that were not apparent on the mapping provided for the job. CTL provided drilling services near the mine entries to determine the mine pool as well as near a bridge on site to determine the foundation depth and bearing capacity. CTL also developed sedimentation and erosion control plans for all disturbed sites.



Project: Williams Refuse Pile

Client: Targe Energy

Contact: Van Plocus

Phone: (412) 784-0750

Location: Harrison County, West Virginia

Project Description: CTL Engineering of West Virginia, Inc. was selected to perform engineering related services including environmental services, site design, and permitting for Targe Energy Reclamation, LLC during this *turnkey project*. This project was treated very similar to a complete surface mine application. The scope of services provided by CTL included a refuse removal plan, field reconnaissance, ash backfill design, permits preparation, and environmental sampling.



Project: Maryland Deep Mine Closures

Client: Maryland Department of Environment – AML Division

Contact: Tim Miller

Phone: (301) 689-1440

Location: Allegheny and Garrett County, Maryland

Project Description: CTL Engineering of West Virginia, Inc. was retained to provide the develop detailed engineering design plans and construction plans including; cost estimates, bid documents, project drawings, maps, plans & specifications for the reclamation construction of multiple mine mouth closures. Design and Plans included dry and wet mine seals, bat gates, regrading, drainage structures and site reclamation.



Project: Fairmont Subsidence

Client: WVDEP AML

Contact: AML Division (Bridgeport Office)

Phone: (304) 926-0499

Location: Harrison County, West Virginia

Project Description: CTL Engineering provided surveying, reclamation design and subsurface investigations for this Abandoned Mine Lands and Reclamation project. The surveying was completed in order to establish the areas that will be reclaimed and to locate utilities that were not apparent on the mapping provided for the job. CTL provided drilling services near the mine entries to determine the mine pool as well as near a bridge on site to determine the foundation depth and bearing capacity. CTL also developed sedimentation and erosion control plans for all disturbed sites.



Project: Blackwater River
Client: WVDEP AML
Contact: AML Division (Bridgeport Office)
Phone: (304) 926-0499

Location: Tucker County, West Virginia

Project Description: CTL Engineering of West Virginia, Inc. provided Engineering Design Services and construction documents to rehabilitate an existing concrete dam and install a rotating drum and limestone slurry treatment facility on the Blackwater River. This project was a cooperative project with West Virginia Department of Environmental Protection and West Virginia Division of Natural Resources. This project has been recognized by "Trout Unlimited" and was mentioned in the February 1993 issue of "Outdoor Life". The Blackwater River/Beaver Creek Treatment Project has successfully transformed a formally dead section of the Blackwater River into a high quality trout fishery and was recognized by the *US Dept of Interior, Office of Surface Mining, as the 1999 Appalachian Region Award Winner.*



Project: Taylor Creek Impoundment
Client: WVDEP AML
Contact: AML Division (Bridgeport Office)
Phone: (304) 926-0499

Location: Clay County, West Virginia

Project Description: CTL Engineering of West Virginia, Inc. provided Engineering Design Services and construction documents necessary for the reclamation and extinguishment of a 120-acre burning refuse pile. This project also included the subsurface investigation of burning material to depths of approximately 110 feet, and the design and reconstruction of approximately 3,400 feet of Taylor Creek. Several areas of slope instability required stabilization. Additionally, an existing 24-acre coal related impoundment had to be evaluated, dewatered and the area stabilized.



Project: General Clay
Client: ODNR
Contact: AML Division (Bridgeport Office)
Phone: (304) 926-0499

Location: Hocking County, Ohio

Project Description: CTL Engineering of West Virginia, Inc. was selected by the ODNR to remediate existing highwalls, regrade slopes to minimize highwall areas and provide drainage from the site. CTL also worked to provide the removal of low lying areas and diversion ditches, the removal and offsite disposal of existing culvert. CTL was responsible for the installation of new 18-inch PE-PVC culvert, temporary erosion and sedimentation controls, and two zero discharge runoff berms. This was one of the numerous projects CTL completed for the bond forfeiture program in Ohio.

