EXPRESSION OF INTEREST

To provide

Professional Engineering Design Services

and

Construction Monitoring Services

for the

Sugartree Branch

Refuse Pile Project

Logan County, West Virginia

DEP15233

Prepared for the

West Virginia Department

of Environmental Protection

Office of AML&R

CTL Engineering of West Virginia, Inc.

733 Fairmont Road
Morgantown, WV 26501

510 C Street
South Charleston, WV 25303

Table of Contents

Statement of Qualifications to Provide Professional Engineering Services

GTL ENGINEERING

CTL Engineering Of West Virginia, Inc.
733 Fairmont Road, Morgantown, West Virginia 26501
Phone: 304/292-1135 • Fax: 304/296-9302
e-mail: ctlwv@ctleng.com

AN EMPLOYEE OWNED COMPANY

Consulting Engineers • Testing • Inspection Services • Analytical Laboratories

Established 1927

November 30, 2010

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

Re: RFQ #DEP 15233
Expression of Interest
Design Engineering Services Proposal
Sugartree Branch Refuse Pile Project

Gentlemen:

CTL Engineering of WV, Inc. is very pleased to present this proposal 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 offices in Charleston and 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 refuse pile regrading, abandoned portal seals and drainage control structures. The Sugartree Branch Refuse Pile Project is similar in scope to more than 50

AML design projects we have successfully completed. Attached to this proposal are numerous examples of similar projects successfully designed and completed, including several projects that were nominated and chosen as National AML Reclamation Award winners!

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.

Royden L. Loucks
Director Business Development

CTL ENGINEERING

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

Request for Quotation

RFQ NUMBER	PAGE
DEP15233	1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
CHUCK BOWMAN
304-558-2157

VENDOR
RFQ COPY
TYPE NAME/ADDRESS HERE
CTL Engineering of WV, Inc.
733 Fairmont Road
Morgantown, WV 26501

SHIP TO
ENVIRONMENTAL PROTECTION
DEPARTMENT OF
OFFICE OF AML&R
601 57TH STREET SE
CHARLESTON, WV
25304 304-926-0499

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
11/03/2010				

BID OPENING DATE: 12/09/2010 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		906-29		

SUGARTREE BRANCH REFUSE PILE 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 ENGINEERING DESIGN SERVICES AND CONSTRUCTION MONITORING SERVICES AT THE SUGARTREE BRANCH REFUSE PILE PROJECT IN LOGAN COUNTY, WEST VIRGINIA, PER THE FOLLOWING BID REQUIREMENTSAND ATTACHED SPECIFICATIONS.

BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THIS CONTRACT NULL AND VOID, AND TERMINATE SUCH CONTRACT WITHOUT FURTHER ORDER.

RECEIVED
2010 DEC -6 PM 12:10
WV PURCHASING DIVISION

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
[signature]	(304) 292-1135	Nov. 24, 2010

TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE
Dir. Business Dev.	55-063-1834	

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

RFQ No. DEP 15233

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: 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 the debt owed is an amount greater than one thousand dollars in the aggregate.

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.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "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 exceed five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this 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.

Under penalty of law for false swearing (***West Virginia Code*** §61-5-3), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: CTL Engineering of West Virginia, Inc.

Authorized Signature: _____ Date: Nov. 24, 2010

State of West Virginia

County of Monongalia, to-wit:

Taken, subscribed, and sworn to before me this 24 day of November, 2010.

My Commission expires April 27, 2019.

AFFIX SEAL HERE

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
JESSICA L. MCCLURG
CTL Engineering of WV
739 Fairmont Road, Morgantown, WV 26501
My Commission Expires April 27, 2019

NOTARY PUBLIC Jessica L. McClurg

Project Management Plan

Our approach to the **Sugartree Branch Refuse Pile Project** will be similar to other CTL AML refuse pile stabilization and 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.

- An investigation shall be performed to define thickness of refuse to minimize grading . Any investigation will focus on safety to insure the safety of the local inhabitants and dwellings.

- 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;
4. Provide plan for stream bank protection;
5. Recommendations for removal / demolition of existing structures;
6. Site Profiles;
7. Cross Sections;
8. Drainage systems and control structures, with details;
9. Survey control points;

10. Miscellaneous Site details.

- CTL will also provide all necessary data for NPDES permits including S&E Control Plans as required for the site construction and if deemed necessary, perform environmental assessments.
- 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.
- Construction observation will be provided during the construction phase of the projects
- 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

Sugartree Branch Refuse Pile

Project Scope of Work:

Design diversion channels, ditches and/or underdrains to transport drainage

Design regrading plan to stabilize and reclaim refuse areas

Design stream bank protective measures

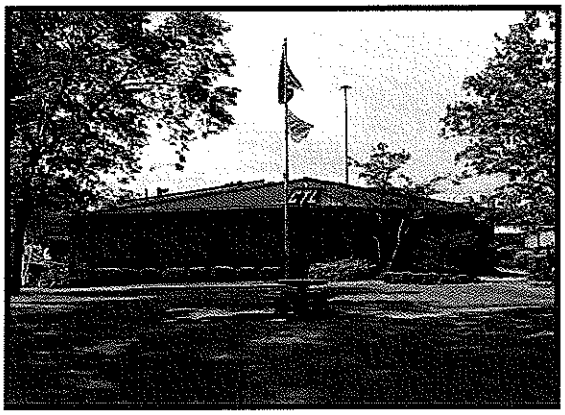
Provide plan for removal / demolition of on-site structures

Provide revegetation plan including soil cover for all areas disturbed during construction

Provide required data for S&E Control Plans and NPDES Permit submittal by AML

CTL Engineering Inc.

An Employee Owned Company



CTL Engineering, Inc. (CTL Engineering) is a full service consulting engineering, testing, inspection, and analytical services company. CTL Engineering, formerly known as Columbus Testing Laboratory, was established in 1927 as an independent engineering testing laboratory serving the local community. During the early years, our expertise focused mainly on soils, foundation engineering, and construction testing and inspection services.

***Business First Journal* regularly lists CTL Engineering, Inc. as one of the top engineering firms in Central Ohio in terms of employees and revenues generated. *The Engineering News-Record* ranked CTL Engineering Inc. among top 500 architectural and engineering firms in the nation. CTL Engineering maintains a staff of over 200 employees, including registered engineers, architects, chemists, environmental scientists, geologists, hydrologists, wetland scientists and technicians.**

Today, CTL Engineering regularly performs services throughout all of West Virginia and in a majority of Mid-Atlantic and Midwestern states.

YEARS of SERVICE

CTL Engineering Inc. has been in business since 1927 and has been providing quality consulting engineering services for over 80 years. CTL Engineering of West Virginia will be celebrating it's 28th anniversary this year.

CTL Engineering Inc. provides ***consulting engineering services, testing and inspection services and offers a full-services analytical laboratory in-house.*** CTL also provides Geotechnical Engineering, Environmental Engineering Civil Engineering, Mining Engineering, Construction Inspection and Testing, Nondestructive Testing and Inspection, Forensic Science, Accident Re-Construction, Roofing Consulting, Product Testing, Laboratories, Analytical Chemistry, Materials Testing, and Metallurgy Services.

FOR MORE INFORMATION CONTACT US:

CTL Engineering of West Virginia, Inc.

733 Fairmont Road
Morgantown, WV 26501
(304) 292-1135 Phone
(304) 296-9302 Fax

510 C Street
S. Charleston, WV 25303
(304) 746-1140 Phone
(304) 746-1443 Fax

www.ctleng.com

CTL ENGINEERING

CTL Engineering of West Virginia, Inc.

An Employee Owned Company

CTL Engineering of West Virginia, Inc. (CTL of WV) is a full service consulting civil engineering, testing, inspection, and analytical services company. CTL Engineering of West Virginia, Inc. was formed in 1981 to service West Virginia, Maryland and Pennsylvania. CTL of WV is part of CTL Engineering, Inc. formerly known as Columbus Testing Laboratory, which was established in Columbus, Ohio in 1927 as an independent engineering testing laboratory serving the local community. During the early years, our expertise focused mainly on soils, foundation engineering, and construction testing and inspection services.

The Engineering News-Record ranked CTL Engineering, Inc. among top 500 architectural and engineering firms in the nation. CTL Engineering maintains a staff of over 200 employees, including registered engineers, architects, chemists, environmental scientists, geologists, hydrologists, wetland scientists and technicians.

CTL of WV provides total Civil Site Design for development projects throughout West Virginia. These designs include site layouts, utility design and interconnections, stormwater management design, parking and roadway design, permit preparation and submittal, and interaction with architects, owners and all interested parties to the projects.

CTL of WV provides all necessary surveying services required of projects including boundary and ALTA surveys, topographic surveys, aerial survey control, GPS surveys, and site construction surveys to assure proper construction and compliance with specifications of the project.

CTL of WV has become an industry leader in geotechnical design and investigations. In the past 5 years, CTL of WV has provided over 1000 geotechnical investigations including drilling, sampling and design for both the public and private sectors. CTL of WV is regularly called upon to provide unique geotechnical engineering design services for projects throughout the United States and Canada.

CTL of WV provides environmental services for developments throughout West Virginia and Maryland. Environmental Services include Phase I and II ESAs, wetland delineation and mitigation plans, State and Federal 401 and 404 Permit submittals, Ms4 Phase II storm water permitting, soil and groundwater sampling, asbestos surveys and sampling, lead based paint testing, mold testing, UST removal oversight, hazardous material identification and remedial design and other environmental services as required

CTL of WV provides construction, material and concrete testing and observation services. CTL of WV has ten field technicians providing dedicated construction observation and compliance testing. CTL's in-house material laboratory provides the much needed prompt turn-around required for projects to be successful.

Additional services provided by CTL include Nondestructive Testing and Inspection, Forensic Science, Accident Re-Construction, Roofing Consulting, Product Testing, Laboratories, Analytical Chemistry and Metallurgy Services.

CTL ENGINEERING

Corporate Specialized Experience

- ***CTL has designed 4 projects that have received national Awards for excellence in AML Reclamation***

Project Synopsis

- ***Burning Refuse Piles***
- ***Impounding Refuse Embankments***
- ***Mine Fire Extinguishment***
- ***Landslides***
- ***Mine Subsidence Stabilization***
- ***Stream Quality Enhancement***
- ***Highway Relocation Co-Op Agreements***
- ***Public Water Distribution Systems***

Relative to Abandoned Mine Land Reclamation and Geotechnical Engineering, CTL Engineering is a leader! During recent corporate history (i.e., the past 20 years), we have conducted more than 1,500 Mine Subsidence Investigations, designed more than 150 Mine Reclamation projects, performed over 5,000 Subsurface Investigations, and completed 200 Civil Engineering site designs. Our Mine Reclamation Engineering Department completed numerous projects under contracts with the West Virginia Division of Environmental Protection, Maryland Bureau of Mines, Ohio Department of Natural Resources, Pennsylvania Department of Environmental Protection, US Soil Conservation Service (VA Ramp), US Office of Surface Mining, US Bureau of Mines, and US Forest Service.

Attached to this section are a few selected pictorial examples of various completed projects that CTL has designed and have been or are being constructed. Also attached is a detailed listing of design projects this office has successfully completed during the past 18 years. Finally, a schedule of project abstracts of selected AML assignments is enclosed which describes the project, identifies the location, lists the owner, telephone number and owner's address, and the scope of services provided.

CTL Engineering's history is unsurpassed in the realm of Geotechnical/Mine Reclamation Engineering. As evidenced by our project listing and resumes' of staff individuals, many other projects have been accomplished that are similar in scope to this contract but too numerous to list within this text. We would be pleased to supplement any other information that may be required.

AML & Relevant Project Experience

HIGHWALLS

- Camp Run Highwall, WVDEP
- Germano Highwall, ODNR
- Midlothian Highwall, MD Bureau of Mines
- Austen Highwall, WVDEP
- Sovern Run, WVDEP
- Ridgeland Highwall, ODNR

OPEN PITS

- Sugar Grove, #1, #2, & #3, WVDEP
- Baldwin, Pickens & Lick Run, ODNR
- Miller Road, MD Bureau of Mines
- Rumley Highwall, ODNR
- Tunnelton Gob, WVDEP
- Matthew Run, MD Bureau of Mines

OPEN MINE SHAFTS

- Witch Hazel Mine Shaft, ODNR
- Everettville Portals, WVDEP
- Kempton Mine Shaft, MD Bureau of Mines
- Wellston Mine Shaft, ODNR
- Piney Creek, WVDEP
- Degrava Mine Shaft, ODNR

REFUSE PILES

- Ocean Gob Pile, MD Bureau of Mines
- Alderson Branch, WVDEP
- Edna Refuse Piles, WVDEP
- American Bituminous Power Partners, ABPP
- Jane Lew Tipple, WVDEP
- Harrison Power Plant, Allegheny Power
- North Fork Refuse Pile, WVDEP
- Austen Highwall Refuse Pile & Portals, WVDEP
- Bull Run Restoration, ODNR

MINE SUBSIDENCE

- Thomas/Euclid Avenue, WVDEP
- Morgantown Airport, WVDEP
- Cambridge Walmart, Fletcher Bright
- Rock Hill Schools, Rock Hill School District
- Rt. 936 Stabilization, MD Bureau of Mines
- Northern West Virginia Community College, WV Board of Regents
- Ellesmere Avenue, ODNR
- Clarksburg Glenwood Hills, WVDEP
- Midlothian, MD Bureau of Mines

MINE DRAINAGE/STREAM RESTORATION

- Deckers Creek, WVDEP
- Whiskey Run, ODNR
- Oceola Mills, Penn Mining Corp
- Georges Creek, MD Bureau of Mines
- Bell Mine Drain, ODNR
- Majestic Mine, ODNR

- Blackwater River/Beaver Creek Treatment Project
- Aaron's Run, MD Bureau of Mines

MINE FIRES/REFUSE FIRES

- National Mine Fire, MD Bureau of Mines
- Frontz/Folly Mine Fire, ODNR
- Blue Pennant, WVDEP
- Blue Bell Mine, ODNR
- Red Hollow Burning Refuse, WVDEP
- Jamison Burning Refuse, WVDEP

LANDSLIDES

- Chickwan Landslide, ODNR
- Rt. 1 Landslide, ODNR
- Kitzmiller Landslide, MD Bureau of Mines
- Barton Landslide, Office of Surface Mining
- Westernport Landslide, MD Bureau of Mines
- Ohio Avenue, WVDEP
- Fink Refuse Pile Landslide, Office of Surface Mining
- Robinson Run Landslide, WVDEP

WATER IMPOUNDMENTS

- Taylor Creek Impoundment, WVDEP
- CONSOL Impoundment Certifications
- Amigo Smokeless Impoundment, WVDEP
- The Woods, Impoundment Design
- Cypress Emerald Slurry Dam, Cypress Coal
- Enoch Township Impoundment, ODNR
- Pauline Mine, ODNR

- Marsh Hill, MD Bureau of Mines

WATER SUPPLY REPLACEMENT

- Moundsville Water Plant, WVDEP
- Rohr Road, WVDEP
- Peel Tree, WVDEP
- Woodworth Road, ODNR
- Water Well Impact Study, PADEP
- New Straitsville Water Tank, Town of New Straitsville, Ohio

SPECIAL PROJECTS/ENVIRONMENTAL ISSUES

- I-70 Subsidence, ODOT
- Glade Run Remediation, Allegheny Development
- Lafayette Road H-Pile Wall, ODNR
- Banff/Canmore Commercial Development, Norwest Calgary
- Blackwater River/Beaver Creek Treatment Project, WVDEP
- Dynamic Compaction of Mine Spoil, THF Realty
- Jane Lew Tipple, WVDEP
- Slab Fork Mine Dump, WVDEP
- Dickerson Slurry Pond, DTE

CTL Engineering Inc.

Professional Services

Established 1927

Analytical Chemistry
- Soil
- Water
- Oils
- Sludges
- Solid and Hazardous Wastes
- Liquid and Solid Fuels
- Metals
- Organics
- Construction Materials

Construction Inspection
- Soils, Concrete, Asphalt, Masonry, Fireproofing, and Steel
- Single and Multi-Story Structures
- Pavement for Streets, Airports, Etc.
- Embankments, Fill, Cut, Etc.
- Earth and Concrete Dams
- Pre and Post Construction Inspection
- Floor Flatness

Drafting Services
- AutoCad
- Microstation
- Digitizing

Environmental
- Site/Facility Assessment
- Hydrogeologic Studies and Aquifer Characterization
- Site Remediation
- Site Abandonment and Closure Planning
- Permit Preparation
- Underground Storage Tank Management
- Wellhead Protection
- Asbestos Survey
- Abatement Monitoring
- Wetlands Delineation
- Wetlands Mitigation
- Wetlands Permitting

Existing Structure Evaluation
- Bridges/Buildings
- Sonic Velocity Testing
- Delamination Determination
- Half Cell Potential Tests

Facilities Management -Pavement
- Condition Assessment
- Maintenance & Rehabilitation Strategies
- Prioritization
- Deterioration Rates
- Network Needs & Long Range Goals
- Budgeting

Forensic Science
- Landslide, Soils and Foundation Failures
- Building Failures
- Product Liability Investigations
- Accident Reconstruction
- Roofing Failures
- Product Failures
- Legal Testimony

Geotechnical
- Site Selection
- Subsurface Exploration – Drilling Services
- Foundation Analysis & Design
- Embankment & Earth Dam Analysis
- Slope Stability Analysis
- Hydrogeologic Studies
- Bridges
  Pavement Design

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

Metallurgy
- Fracture Analysis
- Metallography
- Application Recommendations
- Failure Analysis
- Corrosion studies
- Tensile and Hardness

Mining Engineering
- Mine Reclamation Design
- Permit Preparation
- Mine Plan Design
- Refuse Disposal Design
- Drainage Control Structures
- Environmental Monitoring
- Subsidence Investigations

Nondestructive Testing & Inspection
- X-ray Radiology
- Ultrasonic Inspections
- Magnetic Particle Inspection
- Liquid Penetrant Inspection
- Specialized Inspection / Test Programs
- Level III Services

Product Testing
- Consumer Product Testing
- Mechanical and Physical Property Testing
- Hydrostatic Testing
- Load and Strength Testing
- Mechanical Engineering Design and Analysis
- Pressure Gauge Calibration

Roofing Engineering Services
- Design & Construction Administration (Plans and Specifications)
- Quality Control/ Roof Inspection
- Roof Surveys Evaluation
- Moisture – Infrared & Nuclear
- Seminars Design Maintenance
- Management Programs
- Laboratory Testing

Site/Civil Engineering
- Commercial Land Development
- Residential/Community Planning
- Infrastructure Planning

Software Development
- Application Software
- Internet & Intranet

Surveying & Mapping
- Property surveying & boundary determination
- Topographic mapping development
- Global Positioning System

Welding & Quality Control
- Shop & Field Certified Welding Inspection
- Welding and Brazing Qualification
- Procedure Development
- QA/QC Programs

Corporate Headquarters
2860 Fisher Road **Columbus, Ohio 43204**
Phone: (614) 276-8123, Fax: (614) 276-6377
ctl@ctleng.com
www.ctleng.com

OFFICES:

CTL of West Virginia.
733 Fairmont Road
Morgantown, WV 26501
Phone:(304) 292-1135
Fax: (304) 296-9302
ctlwv@ctleng.com

510 C Street
South Charleston, WV 25303

422 E. Wards Corner Road
Cincinnati, OH 45140
Phone: (513) 722-8665
Fax: (513) 722-8669
ctlcinci@ctleng.com

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

3085 Interstate Parkway
Brunswick, OH 44212
Phone: (330) 220-8900
Fax: (330) 220-8944
ctlcleve@ctleng.com

102 Commerce Dr.
Wapakoneta, OH 45895
Phone: (419) 738-1447
Fax: (419) 738-7670
ctlwapak@bright.net

4343 Saguaro Trail
Indianapolis, IN 46268
Phone: (317) 295-8650
Fax: (317) 295-8395
ctlin@ctleng.com

Mining Engineering Services

CTL Engineering has experienced engineers, geologists and mining technicians to provide the expertise to insure successful mining operations. We provide abandoned mine land reclamation design and project management, mine subsidence evaluations and remediation plans, hydraulic and hydrology studies, hydrogeologic evaluations, mine permitting, and coal reserve studies.

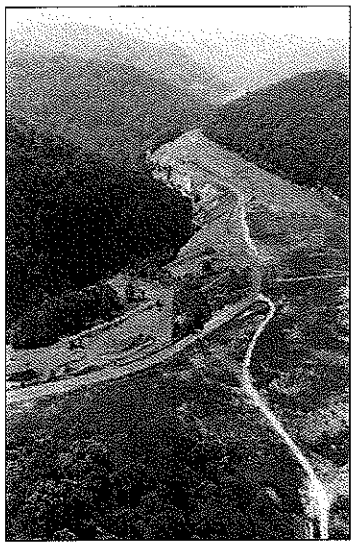
The CTL Mining Engineering Group coordinates with our drilling services and various testing departments to provide a full scope of services to the mining industry. Our laboratories are certified to perform the water and overburden analysis prescribed by federal regulatory programs.

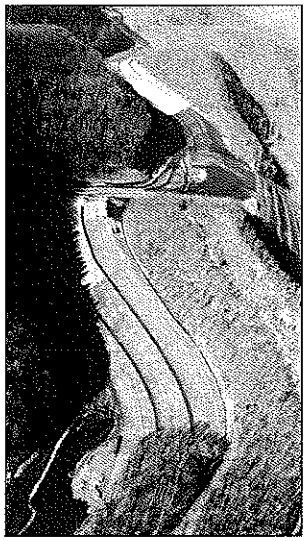
CTL Engineering provides drainage control structure design to comply with the regulatory requirements for controlling and treating site damage. Exploration equipment and remote video camera monitoring are used by CTL Engineering to prepare accurate maps for reclamation, subsidence stabilization measures and mine closures.

We have experienced mechanical and metallurgical engineers on staff to provide mine equipment evaluation and consultation services. CTL Engineering is a proven source for accurate and dependable technical information.

CTL Mining Services Include:

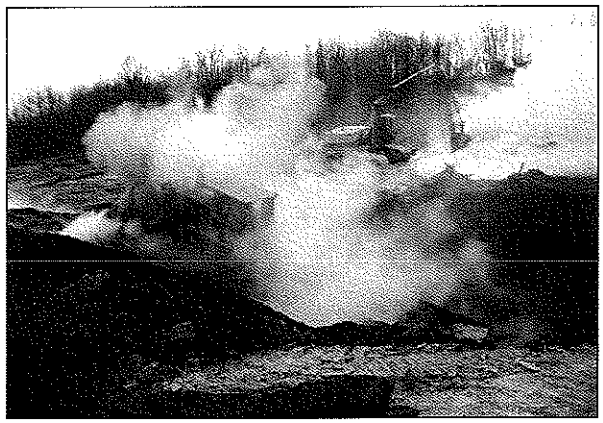
- Subsidence Investigations
- Abandoned Mine Reclamation Design
- Permit Preparation
- Mine Design Plan
- Refuse Disposal Facility
- Environmental Monitoring
- Coal, Water and Overburden Analysis
- Drainage Control Structure Design
- Failure Analysis
- Legal Testimony
- Acid Mine Drainage





Taylor Creek Impoundment, West Virginia
Reclamation of a 120-acre burning refuse pile and dewatering and abandonment of a 24-acre coal-related impoundment.

Blackwater River, Water Improvement Project, Davis, West Virginia



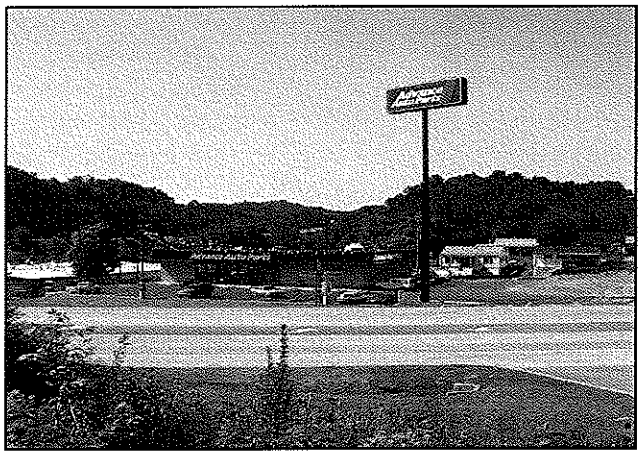
Jamison Burning Refuse Reclamation Project

Civil/Site Engineering

Services Include:

- Commercial Land Development
- Residential/Community Planning
- Infrastructure Planning & Design
- Pavement Design and Management
- Conceptual Designs/Presentations
- Recreational Resort/Facility Planning
- Erosion & Sediment Control Design
- Stormwater Management Systems
- Preliminary Cost Estimates/ Feasibility Analyses

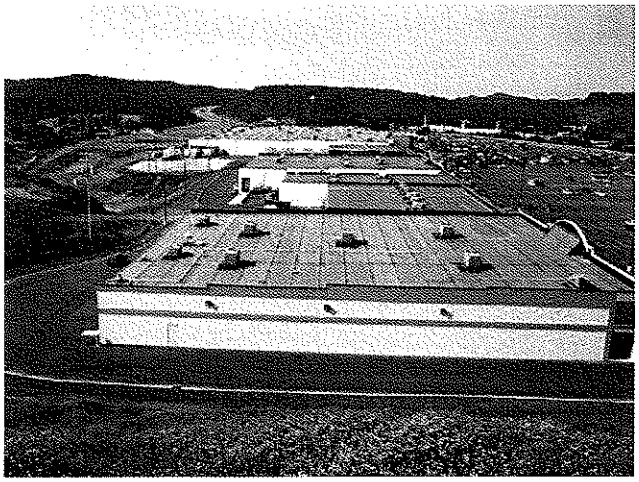
CTL Engineering's in house staff provide a full array of services in concert with our Site/Civil Department including mapping and surveying services.



CTL Engineering of West Virginia, Inc. provided site plans for this Advance Auto Parts Store in Morgantown, West Virginia

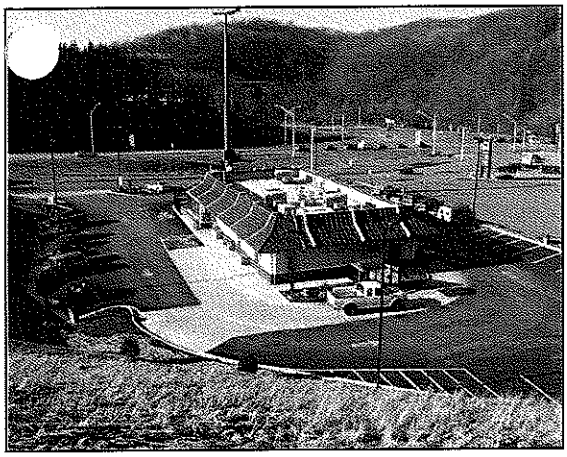
From a Raw Piece of Property --
CTL Engineering Provides Full Site Layout Design.

- Topographic Mapping Development
- Global Positioning Systems (GPS) Services
- Aerial Mapping Layout & Control
- Construction Layout
- Wetlands Delineation/Flood Plain Determination & Certification
- Property Survey & Boundary Determination
- Micrometer Leveling



CTL Engineering of West Virginia, Inc. provided geotechnical engineering, materials testing, observation services and surveying services for this project.

Surveying & Mapping



CTL Engineering, Inc. provided surveying services for this McDonalds site in Star City, West Virginia

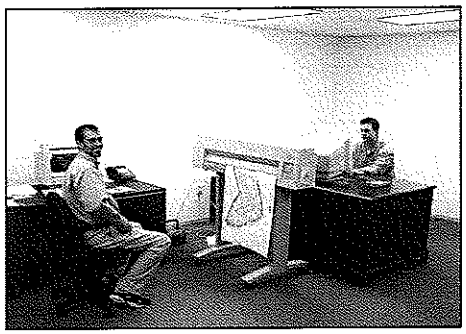
CTL Engineering, Inc. maintains a full service, in-house survey and mapping team which has extensive experience in performing most common surveying needs and some not so common.

CTL has the professional staff and the latest equipment to support three (3) full survey crews, including a Global Positioning System (GPS) which gives us an added dimension to our surveying and mapping capabilities.

We have performed surveying and mapping on many of our civil site projects and have supplied construction stakeout and monitoring for many of our clients.

Professional Services:

- Property surveying and boundary determination
- Topographic mapping development
- Aerial mapping layout and control
- Global Positioning System (GPS)
- Construction Layout
- Settlement Plate Monitoring
- Micrometer Leveling
- Flood Plain Determination and Certification
- Wetland Delineations



Project Synopsis:

- Residential Subdivision Layout
- Commercial Development Layout
- Access Road and Parking Lot Layout
- Bridge Construction Layout and Monitoring
- Elevation Certificates (FEMA)
- Property Survey Projects
- Stormwater Surveillance Mapping
- Water body Sounding Studies

CTL ENGINEERING

Environmental Services

TL Engineering's Environmental Department staff has a combined total of 98 years of experience in managing various types of environmental projects. Our personnel are familiar with regulatory requirements and have established good working relationships with state and local agencies; such as the Ohio EPA, the State Fire Marshal's office, local fire and health departments, etc. Our personnel has conducted thousands of background researches and file reviews at numerous state agencies, including ODNR, OHPO, BUSTR, Ohio EPA, county courthouses and local fire and health departments.

CTL Engineering closely follows the ASTM Standard of Practice 1527-00 as well as any additional requirements placed by the client, ıch as wetlands assessment, delineation, permitting and mitigation; asbestos survey, sampling, evaluation and abatement monitoring; and similar non-ASTM scope considerations.

CTL Engineering maintains an in-house analytical laboratory as well as experienced geologists, hydrogeologists, and environmental scientists to conduct the background review and site reconnaissance to develop a list of constituents of concern. Our environmental staff has designed, constructed, installed, and operated various types of innovative remedial technologies, such as *in-situ* and *ex-situ* bioremediation, soil vapor extraction, groundwater extraction, free-product recovery, and bioslurping.

The following is a listing of services CTL Engineering provides:

Management Systems Analysis

Wetland Systems
- Wetlands & "Jurisdictional Waters of the State Delineation"
- Wetland Permitting & Mitigation

Landfill
- Site Characterizations
- Explosive Gas Monitoring
- Liner and Cover Design
- Leachate Sampling & Testing

Pilot Testing Services
- Soil Vapor Extraction
- Groundwater Sparging
- Aquifer Testing
- Slug Testing
- Soil Gas Surveys

Analytical Chemistry
- GC/MS, AA and IR
- Solid and Hazardous Waste Characterization
- Metals and Organics
- BTEX, TPH and PNA
- TCLP
- Liquid and Solid Fuels
- PCB Analysis

UST Services
- Removal & Closure Assessments
- Contaminant Migration Assessments
- Remedial Corrective Actions

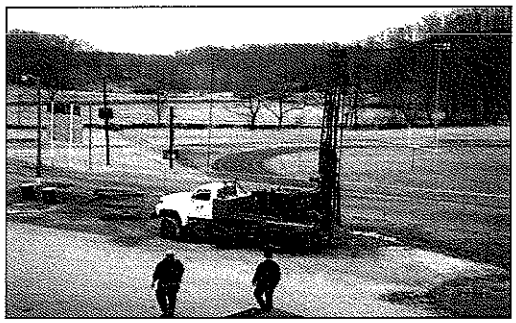
Hydrogeologic Investigations
- Hollow Stem Auger Drilling
- Soil and Rock Sampling
- Monitoring Well Installation
- Wellhead Protection Planning
- Water Resources Assessment

Environmental Permitting
- NPDES Permitting Support
- Wastewater Treatment
- Part B Permit Application

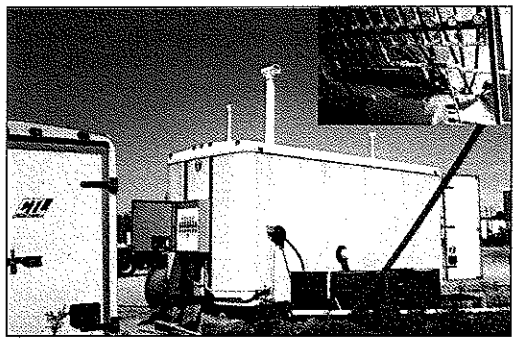
Property Assessments
- Phase I Environmental Assessments
- Phase II Environmental Assessments
- Asbestos Hazard Evaluation
- Asbestos Abatement Monitoring

Environmental Restoration

Design, Procure, Install and Operation
- Soil Vapor Extraction Systems
- Bio Venting
- Landfarm
- Beneficial Reuse Projects
- Free Product Recovery
- Activated Carbon Filtration
- Air Stripping
- Groundwater Sparging
- Bioremediation



UST Site Assessment, Riverview Local School



In Ohio, CTL was the first to employ a patented gaseous nutrient injection technology, PHOSTER™, to remediate soil/groundwater contaminated with gasoline and diesel in accordance with BUSTR action levels.

www.ctleng.com

Geotechnical Engineering

The Geotechnical Engineering Department at CTL Engineering routinely performs subsurface investigations, and soil and rock testing. We prepare engineering reports, make recommendations regarding foundation and construction techniques, and perform other pertinent geotechnical services, as dictated by a given project.

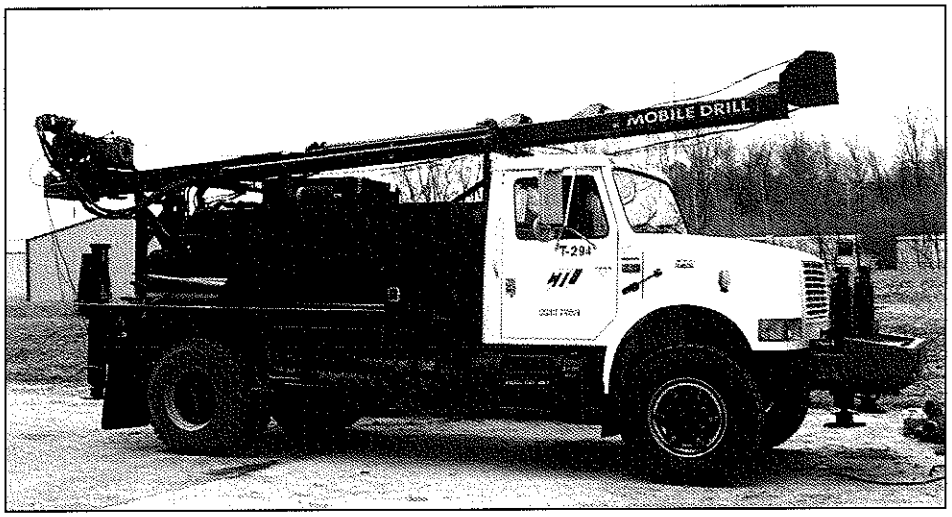
Drilling Services

CTL Engineering owns and operates its own fleet of drill rigs, the largest of which has a capacity to drill and take samples up to 300 feet deep. Our rigs are equipped with large diameter soil and rock core samplers, *in-situ* pressure meters and cone penetrometers. These rotary drilling rigs conduct standard split spoon sampling. Our drill rigs have pumps, wireline and standard coring equipment for proper and efficient execution of subsurface investigations. We can perform pressure meter tests and vane shear tests in the field, in addition to conducting and/or monitoring of well pumps tests.

Analytical Laboratory

Our Soils Laboratory has consolidometers, triaxial and direct sheer apparata, state-of-the-art permeability devices and normal soils classification equipment.

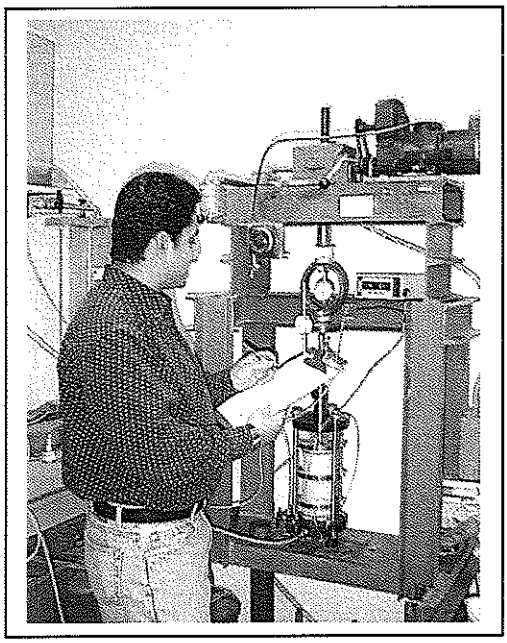
CTL Engineering provides a detailed analysis of the surface and subsurface composition and



CTL owns and operates a fleet of ten (10) drill rigs

Service Listing

- Complete Subsurface Exploration Study
- Foundation Analysis
- Pile, Pier and Caisson Analysis & Inspection
- Embankment & Earth Dam Analysis
- Slope Stability Analysis
- Settlement Analysis
- Pavement Design
- Rock & Mineral Testing
- Hydrogeologic Studies
- Field and Laboratory Testing of Soils
- Legal Testimony



Soils engineers conduct soils tests in CTL's analytical laboratory

www.ctleng.com

Materials Testing

CTL Engineering is a leader in providing analytical services to the construction industry. We maintain a staff of experienced personnel and accurate equipment to guarantee dependable results. We evaluate all types of construction materials. Additionally, CTL can prepare and test Portland cement and bituminous concrete mixes for optimization studies to insure the proper mix design for specific jobs.

We provide complete testing of the following:

Aggregates

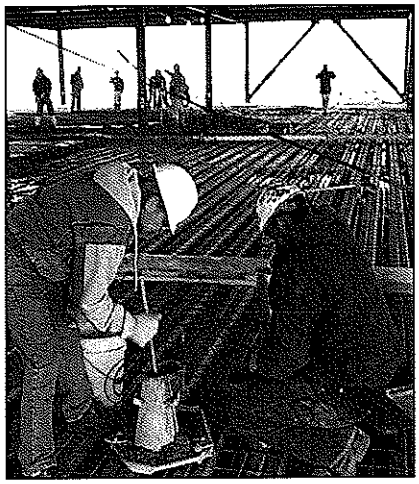
- Component Analysis (sand, gravel, limestone)–Department of Transportation
- Filter Sand – Environmental Protection Agency (EPA)
- Railroad Ballast – American Railroad Engineering Association
- Rip-Rap – U.S. Soil Conservation Service

Soils

- Classification
- Compaction Parameters
- Permeability Tests

Concrete

- Mix Designs
- Mix Verification Tests to verify strength, air content, consistency and yield of concrete
- Compression Tests
- Flexural and Split Tensile Strength Tests
- Modulus of Elasticity
- Creep Testing



CTL Engineering offers petrographic examination of construction materials. These specialized microscopic evaluations allow us to closely evaluate concrete quality and determine the causes and extent of failures in concrete in addition to potential future performance.

In addition to the standard ASTM tests of strength, absorption, dimensions unit weights, etc. CTL Engineering provides several specialty tests on concrete block and brick including the fire rating test specified by the BOCA and efflorescence testing required by many architectural firms.

Asphalts

- Mix Designs
- Nuclear Gauge Calibrations Extraction and Grading
- Core Testing for Density and Strength.

You can be assured of complete quality testing for all your construction mixes.

www.ctleng.com

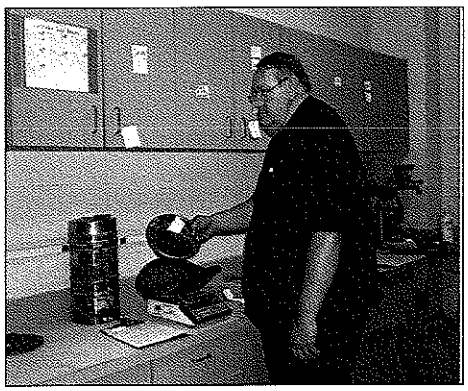
Rapid Chloride Permeameter

Clay-brick, Pipe & Tile

CTL Engineering provides complete and thorough analysis of clay products. Some of the more common tests include:

- Compressive Strength
- Absorption
- Freeze-thaw
- Efflorescence
- Dimensional Analysis
- Acid resistance.

In addition to the standard tests that are required by specification, we perform specific tests on construction materials as dictated by the needs of the customer.

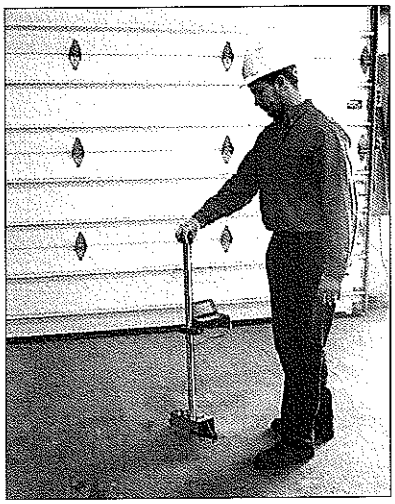


Construction Monitoring

A project's construction phase requires quality control inspections and reliable testing. Building owners, architects, engineers and contractors choose CTL Engineering for field inspections because they know that we are accurate, dependable and perform our services in a timely manner. Our experienced engineers and inspectors are your partners in construction. We help provide a finished quality product.

CTL Engineering provides inspections of the following:

- **Earthwork including Embankment & Foundations**
- **Reinforced Concrete**
- **Floor Flatness**
- **Roofing Systems**
- **Structural Steel**
- **Masonry**
- **Sprayed-on Fire Proofing Installation**
- **Bituminous & Portland Cement Concrete Paving**
- **Single & Multi-Story Building Structures**
- **Pavement for Streets, Airports Runways, etc.**
- **Parking Garages & Bridges**
- **Water & Wastewater Treatment Facilities & Associated Piping Systems**



We perform quality control testing of the above materials and structures in addition to destructive and nondestructive testing of finished pavements and structures.

CTL Engineering examines existing structures to evaluate potential problems. Failed structures are analyzed to determine the cause and extent of damage. We evaluate structural integrity during initial construction and at regular intervals after completion. Our work includes steel reinforced concrete structures. CTL Engineering routinely evaluates metal and concrete pipes.

We perform audio/video surveys, sonic velocity testing, x-ray examinations, half-cell potential and other destructive and nondestructive tests.

CTL Engineering's technicians maintain the following certifications:

- ACI (American Concrete Institute)
- NICET Certification
- Hazardous Material Certification
- Confined Space Entry Training
- Radiation Safety Training
- Soil Technicians

www.ctleng.com

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AML CONSULTANT CONFIDENTI QUALIFICATION QUESTIONNAIRE "Attachme B"

PROJECT NAME Sugar Tree Branch Refuse Pile, Logan County, WV	DATE (DAY, MONTH, YEAR) 09/Dec/2010	FEIN 55-063-1834
1. FIRM NAME **CTL Engineering of West Virginia, Inc.**	2. HOME OFFICE BUSINESS ADDRESS **2860 Fisher Road Columbus, OH 43204**	3. FORMER FIRM NAME **Columbus Testing Laboratories**

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

6. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE
733 Fairmont Road, Morgantown, WV 26501, 304-292-1135, Patrick E. Gallagher, President / Morgantown – 16

7. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM	8a. NAME, TITLE, & TELEPHONE NUMBER – OTHER PRINCIPALS
Patrick E. Gallagher, President **CK Satyapriya, VP/Sec.**	**Ali Jamshidi, Treasurer (614) 276-8123**

9. PERSONNEL BY DISCIPLINE

4 ADMINISTRATIVE	– ECOLOGISTS	– LANDSCAPE ARCHITECTS	1 STRUCTURAL ENGINEERS
– ARCHITECTS	– ECONOMISTS	– MECHANICAL ENGINEERS	3 SURVEYORS
1 BIOLOGIST	– ELECTRICAL ENGINEERS	– MINING ENGINEERS	– TRAFFIC ENGINEERS
4 CADD OPERATORS	7 ENVIRONMENTALISTS	– PHOTOGRAMMETRISTS	X OTHER,
– CHEMICAL ENGINEERS	– ESTIMATORS	– PLANNERS: URBAN/REGIONAL	4 Geotechnical Drillers
3 CIVIL ENGINEERS	2 GEOLOGISTS	1 SANITARY ENGINEERS	4 Driller Helpers
9 CONSTRUCTION INSPECTORS	– HISTORIANS	2 SOILS ENGINEERS	– Metallurgical
– DESIGNERS	1 HYDROLOGISTS	– SPECIFICATION WRITERS	8 Engineering Technicians
2 DRAFTSMEN			

56 TOTAL PERSONNEL

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 5
***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 of West Virginia, Inc.

TOTAL PERSONNEL for CTL Engineering, Inc. is 180, which includes CTL Engineering of WV.

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 _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No

12. A. Is your firm experienced in Abandoned Mine Land 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.

NO

B. Is your firm experienced in Soil Analysis?

YES Description and Number of Projects: Our in-house laboratory performs all ASTM mechanical, organic and in-organic analyses for soils. Our lab is 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 50 projects requiring aerial photography & mapping. While we sub-contract the aerial photography, in-house we provide GPS, surveying and develop the contouring as needed.

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.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Gallagher, Patrick E. **President, Project Manager**	**33**	**33**	**26**

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	REGISTRATION (Type, Year, State)
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	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.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Selfridge, Carl G. **Department Head, Geotechnical Services**	**3**	3	

Brief Explanation of Responsibilities

Deartment Head Geotechnical Engineering. Responsible for subsurface inveatigations, 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	REGISTRATION (Type, Year, State)
Fellow of the American Society of Civil Engineers, The GEO-Institute, Timber Framers Guild, Construction Institute (ASCE)	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.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE
Darrah, Timothy A. **Civil Site Dept. Mgr., Project Manager**	20	20	20

Brief Explanation of Responsibilities

Mr. Darrah is presently responsible for Management and Design for various types of civil engineering projects including reclamation design, commercial and residential development projects. He is also responsible for scheduling, invoicing and client contacts for all surveying projects including topographic, property and construction layout. Mr. Darrah's duties include drafting, writing of property descriptions, hydrology calculations, quantity calculations and various other forms of surveying and civil engineering related duties. He is also proficient in computer software including AutoCAD, Civilsoft, HEC-1, HEC-RAS and various other engineering software.

EDUCATION (Degree, Year, Specialization)

B.S., 1988, Civil Engineering Technology

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.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: **15**
Huffman, Jeffrey T. **Branch Manager/Geotechnical Manager**	**4**	4	

Brief Explanation of ResponsibilitiesMr. Huffman has 18 years experience in Geotechnical Engineering. Branch manager for Charleston office of CTL of WV. Relevant experience includes Project Engineering involving construction of numerous earth and roller-compacted concrete (RCC) Dams. Directed strength testing of in-situ soil and rock, borrow materials and RCC. Involved in full geotechnical design and drawing and specification preparation. Additionally serves as adjunct professor of Civil Engineering at Marshall University for Soil Mechanics, Soil Testing Laboratory and Foundation Design.

EDUCATION (Degree, Year, Specialization)

M.S., 1990, Civil Engineering, Geotechnical
B.S., 1988, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State) Registered Professional Engineer: 1994, PA; 2005, WV; 2007, OH; 2007, KY; 2007, NCEES

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.)	YEARS OF EXPERIENCE		
Moore, D[illegible]d **Project M[illegible]ager/Project Engineer**	YEARS OF AML DESIGN [illegible]ERIENCE: 1	YEARS OF AML RELATED DESIGN EXPERIENCE: 1	YEARS OF DO[illegible]TIC WATERLINE D[illegible]GN EXPERIENCE: 25

Brief Explanation of Responsibilities Thirty years experience in design and construction. He has designed and constructed numerous dams, ponds, irrigation lakes, stormwater management ponds, sediment and erosion control ponds. He has designed ponds and lakes for residential, commercial, and industrial projects as well as solf courses combining water features, irrigation, stormwater management and water quality unto aesthetically pleasing amenities.

EDUCATION (Degree, Year, Specialization)
M.S, 1983, Civil Engineering Civil Design
B.S., 1978, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
ASCE, AIA, Home Builders Assoc., SAME	Registered Professional Engineer: 1986, MD; 2008, NV; 2006, WY; 1984, CO; 2008, Alberta CAN; 2009, WV; 2010, OH; 2010, KY

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.)	YEARS OF EXPERIENCE		
Hovatter Jr, Richard G **Project Manager/Project Engineer**	YEARS OF AML DESIGN EXPERIENCE: 6	YEARS OF AML RELATED DESIGN EXPERIENCE: 6	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 2

Brief Explanation of Responsibilities

Mr. Hovatter is responsible for Natural Stream Restoration & Channel Design, Reclamation Design, Drafting Hydrology, Quantity Calculations, Stability Analysis, Residential Development, Benthic Studies, Electroshock Fish Studies, Valley Fill Footprinting, Surveying, Subsidence Surveys, Pre-Blast Surveys, Acid Base Accounts, Groundwater Inventory. PC Software includes Hydrologic TR-20, TR-55, HEC-RAS,Sura CADD, Excel, Harstad Methods, Word, AutoCADD Land, Quarttro, Access.

EDUCATION (Degree, Year, Specialization)

B.S., 2002 Civil -Engineering Technology, FE

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
	Registered Professional Engineer: 2009, West Virginia ROSGEN Level 1&2 Certified - 2007 HEC-RAS Certification - 2005

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
VCR/Video Recording Equipment

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 2007.

Hydrogeologic Studies
MODFLO
MODPATH
SURFER
CAPZONE
GWPATH
SKUGIS
PHREEQCI
WATEQ4F
Groundwater for Windows

Civil Engineering Software
CADD 2007
Autodesk Land Desktop 2006/07
Profiling
Civilsoft
TR-20 & TR-55
SEDCAD
HEC 1 & 2
Survey 3.0
HEC-RAS
Arc GIS
ArcPAD
Civil 3D

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

SURVEY EQUIPMENT

- Leica 500 Global Positioning System (GPS)
- 6 Total Stations
- NAK Micrometer Level System & Direct Levels
- 4X4 Vehicles
- 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 infiltrometers 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
Peninsula Highwalls, AML Project, Monongalia County, WV	WVDEP- AML 601 57th Street SE Charleston, WV 25304	Highwall Stabilization design, mine seals, drainage systems, grading design and specifications.	$ 244,000	Design 100%
St. Clair Portals, AML Project, Monongalia County, WV	WVDEP- AML 601 57th Street SE Charleston, WV 25304	Draining mine portal remediation design, mine seals, drainage systems, grading design, specifications	$ 1,300,000	Design 100%
Aarons Run Treatment, AML Project, Allegany County, MD	MDE, MBOM	Design of total AMD treatment System including active and passive systems, regrading, bridge and road access, specifications.	$ 800,000	Design 95%
Eccles Subsidence, AML Project, Raleigh County, WV	WVDEP- AML 601 57th Street SE Charleston, WV 25304	Investigation and Design for Subsidence remediation including pond depletion due to subsidence	$ 100,000	Design 100%
Cheat Neck Landslide, AML Project, Monongalia County, WV	WVDEP- AML 601 57th Street SE Charleston, WV 25304	Remiation design for slide area, mine seals, drainage systems, grading and specifications.	$ 179,000	Design 105%
Open Contract to provide engineering design services throughout the State of Ohio	OH Department of Natural Resources AML Bond Forfeiture Program 1855 Fountain Square Court, 2nd Floor Columbus, Ohio 43224	Reclamation Design, geotechnical drilling, mine subsidence, slope stability analysis and design, pressure grout stabilization design, risk assessment, acid mine drainage, burning refuse extinguishment and earthwork calculations	$75,000 /year Fees	N/A

Open Contract to provide engineering design services throughout the State of Maryland	MD Department of Environment 160 S. Water St. Frostburg, MD 21532	Reclamation Design, geotechnical drilling, mine subsidence, slope stability analysis and design, pressure grout stabilization design, risk assessment, acid mine drainage, burning refuse extinguishment and earthwork calculations	$100,000 Fees $1,000,000+ Const.	80%
Farmington Storm Water Design	WV Conservation Agency Monongahela District 201 Scott Avenue Morgantown, WV 26508	Storm water design for Buffalo Creek and Town of Farmington	$2,000,000	Design 85%
TOTAL NUMBER OF PROJECTS: 8		TOTAL ESTIMATED CONSTRUCTION COSTS: $6,000,000		

16. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS SERVING AS A SUBCONSULTANT 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
Harrison Power Station Flyash, Disposal Area, Construction Monitoring, Shinnston, WV	Surveying, Construction Observation and Testing, Flyash Disposal	APS P.O. Box 600 Haywood, WV 26366	On-going	$ 5,000,000.00	$100,000.00
National Engineering, various projects	Subsurface investigations and Geotechnical Drilling for various projects	WVDOH 1900 Kanawha Boulevard Charleston, WV 25305	On-going	$ 20,000,000.00	$150,000.00 /year
Hazelton Prison #4, Hazelton, WV	Subsurface investigations and Geotechnical Drilling, Construction Observation	US Federal Bureau of Prisons	2012	$12,000,000	$300,000
Nelsonville, ODOT, Nelsonville, OH	Subsurface investigations and Geotechnical Drilling, Construction Observation	Ohio Department of Transportation, District 10 338 Muskingum Drive Marietta, OH 45750	2012	$100,000,000	$2,000,000

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)
Mon-View Development 400 acre Commercial development, Granville, WV	Mon View LLC c/o Consol 4000 Brownsville Road South Park, PA 15129	$ 25,000,000	2005	Yes
University Town Centre, Commerical Development Granville, WV	Interstate Development 2137 Volunteer Parkway Bristol, TN 37625	$70,000,000	2005	Yes
Russell Joki, AML Design, Washington, PA	PADEP P.O. Box 8476 Harrisburg, PA 17105	$600,000	2006	Not to this date

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
WV Blue Cross / Blue Shield Headquarters Parkersburg, WV	Civil Site Design, utilities, storm water, foundation, grading, coordination	Oxford Development Pittsburgh, PA	2008	$8,000,000	$100,000

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: President

Printed Name: Patrick E. Gallagher, P.E.

Date: Nov.30,2010

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

CTL Engineering of West Virginia, Inc.

PROJECT ORGANIZATION CHART & KEY PERSONNEL

Patrick Gallagher, P.E., CPGS,WV PS
President, Project Executive

Geotechnical Engineering/Drilling Services

Carl Selfridge
Department Manager

Jeffrey Huffman, P.E.
Charles Waltz, P.E.
Ruben Mick
Project Engineers

Drillers / Driller Helpers

Surveying/ Civil Site Design Services

Tim Darrah
Department Manager

David Moore, P.E.
Gregory Foreman, P.E.
Richard Hovatter, P.E.
Project Engineers

Nathan Huggins
Steve Hegedis
Bucky Nicholson
Staff Engineers / CAD Designers

J B Chambers
Todd Gring
Survey Party Chiefs

Joe Stanley
GPS Surveyor

Natural Stream Engineering

Richard Hovatter, P.E.
ROSGEN Level 1 & 2
Tim Darrah
ROSGEN Level 1

Construction Services & Materials Laboratory

James Gowarty, Jr.
Department Manager

Charles Huff
Department Supervisor

Field & LabTechnicians

CTL ENGINEERING

PATRICK E. GALLAGHER, P.E., C.P.G.S. *President*

Expertise:

Mr. Gallagher serves as President of CTL Engineering of West Virginia, Inc. Projects successfully completed under Mr. Gallagher's direction include: Civil Site Design, Foundation Design, Storm Water Management, Waste Water Design, Roadway design, Parking Lot Design, Geotechnical Investigations & Design, Site Stability Analyses, Mine Subsidence Evaluations, Failure Investigations and Environmental Investigations and Permitting.

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.

Education:

B.S., Civil Engineering
Virginia Polytechnic Institute and State University, Blacksburg, Virginia, 1975
B.S., Geology
Virginia Polytechnic Institute and State University, Blacksburg, Virginia, 1975

Professional Registration / Certifications:

Registered Professional Engineer
Ohio, # 48459; Maryland, # 13256; West Virginia, # 9297; Pennsylvania, # PE-044930-R; Wyoming, # 11033; North Carolina, # 0 32503; Kentucky, # 24988

Certified Professional Geological Scientist, # 6575
Professional Surveyor, WV
Adjunct Professor – Civil Engineering – Fairmont State College 2001 – 2002

Career Experience:

CTL Engineering, Inc.- 29 years
Other – 6 years

Project Experience:

Mining Related

Abandoned Mine Lands and Reclamation Projects
Project manager overseeing the design of various abandoned mine lands and reclamation projects for the West Virginia Department of Environmental Protection. These projects include coal refuse pile stabilization, burning refuse extinguishment and stabilization, acid mine drainage abatement plans, storm water management plans, mine permits, slope stability analysis and hydraulic analysis.

American Bituminous Power Partners, LLP
Project manager for services involving permitting and environmental issues. Conducted on-going inspections and certifications of the impounding refuse facilities and all drainage/sediment control structures for all permitted facilities.

Ohio Valley Plaza, St. Clairsville, Ohio
Project manager for the engineering design services for the dynamic compactions of surface mine spoil for this project. This site was in need of major overhaul; no building could take place without the deep dynamic compaction activities, which made this site fit for construction, while reducing site development costs.

Newpointe Center, Clarksburg, West Virginia
Project Manager for geotechnical engineering, materials testing, and observation services and surveying services for this project. CTL is currently performing materials testing and observation for Phase II of this development.

Ohio Department of Natural Resources (ODNR)
Project manager overseeing mine subsidence investigations throughout the state of Ohio. These projects include hydrology/hydraulic evaluations, floodplain designs, wetland delineations, slope stability designs, surface and deep mine permitting, refuse pile analysis/certification, earthwork calculations, storm water management design, pressure grout abatement, and numerous emergency projects under the ODNR-AML Emergency Program.

Amigo Coal Refuse Facility, Amigo, West Virginia
Project Manager responsible for designing two 42 inch microtunnels beneath an existing and active railroad line. The twin 42 inch culverts were for the diversion of Amigo Creek beneath the railroad. The twin culvert system was approximately 750 lf in total length and required 2 weeks to complete.

Highway / Landslide / Slope Stability

PENNDOT, Open-End Contract, Pennsylvania
Project Manager/Engineer responsible for overseeing geotechnical investigations for 30 separate transportation projects.

Star City Bridge, Star City, WV
Project Manager/Engineer for geotechnical investigations, borings and road relocation during construction of the Star City Bridge.

WVDOH Open-End Contract
Project Manager/Engineer providing geotechnical support to 40 separate projects including new roads and landslides.

Allegheny Restorations, West Virginia
Provided geotechnical engineering, surveying services and shoring design, in coordination with the West Virginia Department of Transportation, for 3 covered bridge projects in West Virginia.

Foundations / Structure

WVU Wise Library
Project Manager/Engineer provided geotechnical oversight of investigations for the building foundation systems on the construction of a new six (6) story library, which included the design of an extensive tie-back soldier pile wall system.

WVU Eye Institute
Project Manager/Engineer providing geotechnical oversight for the geotechnical investigations and foundation recommendations performed for this $5 M dollar patient care facility.

Physicians Office Center, WVU Hospital
Project Engineer responsible for the oversight of the geotechnical drilling and site investigations for this project.

WVU Life Sciences Building
Project Manager/Engineer providing geotechnical oversight of the drilling and investigations and recommendations needed for the construction of the Life Sciences Building.

Civil Site Geotechnical Design

Suncrest Executive Plaza
Under Phase 1 of this five-story office complex project, CTL provided the following services: surveying, geotechnical and civil site design. The civil site design included sedimentation and erosion control plans and permits, storm water management design utilizing 1,600 feet of 48' GCMP for storage, grading plans, utility coordination and WV DOH entrance permits for turning lane access to the site. CTL also provided construction drawings for the project.

WVU Hospitals, Morgantown, WV
CTL provided geotechnical, surveying and civil site design support services in conjunction with WVDOH and WVU for a new access road and parking area design for surrounding hospital area.

Chaplin Hill Business Park, Morgantown, West Virginia
Responsible for site conceptual design, hydrology, stormwater management, grant preparation, supervision during bidding phase, construction management, and final grant approval.

Blanchette Rockefeller Neuroscience Building, WVUHospitals, Morgantown, WV
Project included Site Plan, Site Grading, Utility Coordination, Sedimentation & Erosion Control, Bid Documents & Pre-Bid Conference. Design required close tie to existing facilities and utilities. Coordination between WVU Hospitals and architect to meet site needs and limit day to day disruptions from construction and traffic.

Glenmark Center, Shopping Plaza, Morgantown, West Virginia
CTL provided geotechnical engineering, Phase 1 environmental assessment, civil site design, "site specific" storm water management, surveying, sanitary treatment facilities for this ten plus acre plaza.

E A Development, The District, Student Housing, Morgantown, WV
This is a 30 acre development including 20 apartment buildings, clubhouse. CTL provided geotechnical investigations, conceptual and final plans, road layout, brige location, DOH permit and design for access, grading plans, retaining wall design, storm water systems and detention. CTL was responsible for permitting, including: Sediment &

Erosion Control, DOH Highway Access, Stream Crossing Permit, Right of Access and License Agreement for temporary and permanent culverts and stream crossing, 100 year Flood Study for Monongalia County Development Permit, 401 Water Quality Certification and the Section 404 Permit.

Summersville Fresh Water Intake, Sumnmersville, West Virginia

Responsible for site review and rock mechanics evaluation for North American drillers where approximately 500 lf of a 48 inch micro tunnel was constructed for the intake at the City of Summersville WV water treatment facility adjacent to Summersville Lake. The tunnel was installed through excessively hard, 25,000 psi, crystallized sandstone requiring specialized bits and techniques to overcome the difficult horizontal boring.

Construction Observation & Testing

Allegheny Power Systems (open-ended contract for transmission distribution and power station projects)
CTL performs construction testing and observation, material testing, structural steel and surveying for various projects under this contract.

Fayette Energy Facility, Masontown, PA
Project Manager responsible for overseeing the concrete, soils, aggregates, asphalt and bolted connections for the project site. CTL has provided specialty-testing including: soil resistivity testing, and Windsor Pin testing

Cheat Lake Waste Water Treatment Plant Expansion, Morgantown, WV
Project Manager responsible for providing oversight and recommendations for this project. The project included increasing the capacity from 250,000 gallons/day to 750,000 gallons/day.

Chaplin Hill Sewer and Water System Expansion, Morgantown, WV
Project Manager responsible for overseeing quality assurance for corrosion protection, utility trenching, line expansion and construction methods for this project.

Warrior Run Generation Plant, Cumberland, MD
Project manager for the construction observation and structural steel inspection services for this project.

Professional Affiliations:

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

TIMOTHY A. DARRAH

Civil Site and Survey Department Manager

Expertise:

Mr. Darrah is presently responsible for department management for civil site design and surveying projects including topographic, property and construction layout. Mr. Darrah also serves as project engineer on various types of civil engineering projects including residential and commercial developments, and reclamation design projects. Office work includes site designs, hydrology calculations, quantity calculations, and various other forms of engineering related duties.

Education:

B.S. Civil Engineering Technology
Fairmont State College, Fairmont, West Virginia, 1988

Certifications:

West Virginia Dept. of Highways Compaction Technician
West Virginia Department of Highways Concrete Technician

Career Experience:

CTL Engineering, Inc.: 20 years

Project Experience:

Reclamation

West Virginia Department of Environmental Protection, Division of Abandoned Mined Lands and Reclamation
Performed the survey and design manager on abandoned mined lands on numerous projects for this state agency including: Peninsula Highwalls, St. Clair Portals, Cheat Neck Landslide, Lost Creek Landslide, all within the past five years.

Civil Site Design

Adelphia Cable Company, Various Locales
Project manager responsible for WVDOH and Railroad Crossings permits.

West Virginia University Hospital, Morgantown, West Virginia
Project manager responsible for the design and permitting of a 500 foot turning lane in conjunction with the WVDOH.

Surveying

Lock & Dam Rehabilitation Project in Point Marion, Pennsylvania
Responsible for all Second Order, Class I Surveying for this $45 million Corps of Engineers project.

ODNR Reclamation and Emergency Programs
Survey control and layout for 5 ODNR Reclamation Projects and 5 ODNR Emergency Projects.

Harrison Power Station for a $900 Million SO_2 Removal Project in Shinnston, WV
Survey crew chief responsible for construction stakeout and surveying.

Monongalia County Board of Education
Project surveyor responsible for various surveying services for new school development and additions to existing schools.

Guardian Food Corporation, Various Locales, WV, PA, OH
Project manager that provided ALTA surveys for 34 Hardees Restaurants throughout Ohio, Pennsylvania and West Virginia.

Ohio Department of Transportation
Survey chief responsible for construction stake out of nearly nine miles of proposed road for Route 250 from Cadiz, OH to New Athens, OH. Stake out preliminary centerline and proposed bore hole locations.

Green River Group, Hazelton, WV
Survey chief responsible for construction stake out for Hazelton Road in Preston County, WV. Staked out centerline and cuts and fills.

American Fiber Resources, Fairmont, WV
Survey chief responsible for construction stake out of paper recycling plant, including columns, buildings, wall lines, column plumbness, roads, clarifiers, etc.

Cell Towers, Various Locales
Responsible for surveying lease areas, topographic mapping, road layout and developing plats and descriptions for proposed cell tower sites.

Aerial Photography, Various Locales
Project manager in charge of establishing GPS control for the aerial mapping of numerous projects throughout West Virginia.

Site Development / Residential & Commercial

Chaplin Hill Business Park, Morgantown, West Virginia
Project Manager responsible for conceptual layout and initial site design for the Monongalia County Economic Development Authority.

EA Morgantown, LLC, Morgantown, West Virginia
Project manager responsible for the civil site design of a 900 bedroom student housing complex. Submitted permits to the WVDOH for a turning lane and entrances. Prepared sediment and erosion permits for the WVDEP. Also, prepared stream crossing permits and performed a 100 year Flood Study.

Glenmark Centre, Morgantown, West Virginia
Project manager responsible for civil site design and ALTA surveys at this facility for the following Glenmark businesses including: Lowes Home Improvement Warehouse, Outback Steakhouse, Wendy's, Bob Evans, Holiday Inn Express, and Ruby Tuesday's.

Sterling Ridge Student Apartments, Morgantown, West Virginia
Project Manager for the civil site design for this student-housing complex. CTL also provided surveying design and inspection services.

Suncrest Executive Plaza, Morgantown, West Virginia
Project manager responsible for the civil site design of this project. Duties included the preparation of storm water detention plans, grading, pavement, turning lane and permits for the WVDOH, and sediment and erosion permits.

Water / Waste Water

WVDEP Water Feasibility Investigations:
Project Manager for numerous water feasibility studies over his career at CTL including: Fairview, Tioga / Craigsville, Douglas and Horner's Run in the past five years.

RICHARD G. HOVATTER, JR., P.E. *Staff Engineer*

Expertise:

Mr. Hovatter's responsibilities include reclamation design, topography, Construction layout, Natural Stream Restoration and Channel Design, Drafting Hydrology, Quantity Calculations, Stability Analysis, Residential Development, Benthic Studies, Electroshock Fish Studies, Valley Fill Foot Printing, Surveying, Subsidence Surveys, Pre-Blast Surveys, Acid Base Accounts, Groundwater Inventory. PC Software includes SurvCADD, Excel, Haestad Methods, Word, AutoCAD Land, Quattro, Access, Hydraulic and Hydrological calculations for channel design utilizing TR-55, HEC-RAS, and TR-20 software.

Education:

B.S., Civil Engineering Technology
Fairmont State College, Fairmont, West Virginia, 2002

Professional Registrations/ Certifications:

Registered Professional Engineer, 2009, West Virginia # 18460
Certified Engineer Intern
ROSGEN – Level 1 & Level 2 Natural Stream Design
HEC-RAS Certification

Career Experience:

CTL Engineering Inc.: 6 years

Project Experience:

Reclamation

ODNR – Emergency Program
Staff Engineer responsible for evaluation and design for 14 ODNR Emergency Projects, 1 ODNR AML Project and 2 ODNR Reclamation Projects.

Merkel Landslide, Rayland, Ohio
Prepared designs for a diversion ditch, sediment and erosion control and highwall minimization, including the regrade of a slip area. Performed a watershed analysis and storm water runoff calculations for the project site.

Site Development / Residential & Commercial

Avery Church, Morgantown, West Virginia
Responsible for the design of sediment and erosion structures and storm water collection structures, including ditches, ponds and outlet controls. Prepared the watershed delineation and storm water runoff calculations along with sediment and erosion control methods.

Chaplin Hill Business Park, Morgantown, West Virginia
Prepared the design of a storm water collection structure, including a pond. Performed the watershed analysis and storm water runoff calculations.

Craig Edmond Housing Development, Reedsville, West Virginia
Prepared the design of a storm water collection structure, including a pond, outlet sizing, and placement. Performed the watershed analysis and storm water runoff calculations.

Civil Site Design

Pineview Place, Morgantown, West Virginia
Performed the watershed delineation and storm water calculations. Also prepared the design of an underground storm water storage unit.

Water / Waste Water

Hydrology / Stream Channel

Spruce Hollow, Maryland
Utilized HEC-RAS software to calculate floodplain elevations.

Blue Sky Realty, Morgantown, West Virginia
Utilized HEC-RAS software to calculate floodplain elevations.

EA Morgantown, LLC, Morgantown, West Virginia
Utilized HEC-RAS to calculate the flood plain elevation of the project site.

JEFFREY T. HUFFMAN, P.E. **Branch Manager & Geotechnical Dept. Manager**

Expertise:

Mr. Huffman serves as Branch Manager and Geotechnical Department Manager of CTL Engineering of West Virginia, Inc.'s South Charleston office. Mr. Huffman currently directs all aspects of design and inspection for a staff of 13 professionals. His administration and management responsibilities include marketing, proposal preparation, scheduling, budget control and supervision of office personnel.

Projects successfully completed under Mr. Huffman's direction include: Foundation Design, Roadway & Parking Area Design, Geotechnical Investigations & Design, Slope Stability Analyses, and Failure Investigations. Mr. Huffman has 18 years experience in Geotechnical Engineering and has served as Senior Geotechnical Engineer, Technical Director of Laboratory Services and Technical Superintendent with other Engineering Consultants.

Mr. Huffman currently serves as Adjunct Professor of Civil Engineering at Marshall University teaching courses in Soil Mechanics, Soil Testing Laboratory and Foundation Design.

Education:

B. S. Civil Engineering
Virginia Polytechnic Institute and State University (Virginia Tech), Blacksburg, Virginia, 1988

M.S. Civil Engineering(Geotechnical)
Virginia Polytechnic Institute and State University (Virginia Tech), Blacksburg, Virginia, 1990

Professional Registration / Certifications:

Registered Professional Engineer: Pennsylvania, 1994, No. PE45671E; West Virginia, 2005, No. 016403; Ohio, 2007, No. 72131; Kentucky, 2007, No. 25185; North Carolina, 2008, No. 034520; NCEES Registered, 2007, No. 30346.

Career Experience:

CTL Engineering: 2 years
Other Engineering Consultants: 17 years

Project Experience:

Foundations / Structures

Expert Witness Testimony – Private Clients & Insurance Companies.
Expert testimony for binding and non-binding arbitration cases concerning building foundation and slope failures.

Commercial Structures in North Carolina, Ohio, Virginia, and West Virginia.
Project Manager or Project Engineer for numerous commercial structures; including

multi-story buildings and large scale warehouses. Directed subsurface explorations, provided geotechnical recommendations and prepared geotechnical reports.
Geotechnical Design Recommendations – Ohio Department of Transportation, West Virginia Department of Highway, Pennsylvania Department of Transportation .
Project Manager for geotechnical engineering phases of transportation projects including bridge structures, roadways, embankment fills and soil & rock cut slopes.

Dams – Water Supply and Flood Control.

Project Engineer involved construction of numerous earth and roller-compacted concrete (RCC) Dams. Directed strength testing of in-situ soil & rock, borrow materials and RCC. Functioned as Assistant Resident Engineer during construction. Assisted in the geotechnical design, drawing and specification preparation. Involved the design of storm water detention ponds over Karst topography.

Other

Project Permitting, Susquehanna County, PA – Cabot Oil & Gas Company.
Project Manager for permitting aspects of a 50+ gas well play and collection line system.

Research & Development on Polypropylene Fiber Reinforcement of Soils.
Technical Director over research and development activities including development of design methodologies, installation techniques, field and laboratory testing methodologies, and manufacturing methods.

Adjunct Professor of Civil Engineering at Marshall University, Huntington, West Virginia.
Professor teaching courses on Soil Mechanics, Soil Testing Laboratory and Foundation Design.

Professional Affiliations

American Society of Civil Engineers
American Council of Engineering Companies
International Society for Soil Mechanics and Foundation Engineers
Society of American Military Engineers

DAVID E. MOORE, P.E. **Civil Department Manager**

Expertise:

Mr. Moore has thirty years experience in design and construction in the fields of planning, civil engineering, structural engineering, general contracting, expert testimony, land development, surveying, landscape architecture, project and business management.

Presently Mr. Moore manages the civil engineering department of the CTL Engineering South Charleston WV office. This office performs consulting engineering in the fields of civil engineering, environmental engineering, geotechnical engineering and testing.

Prior to his current position Mr. Moore founded Alliance Consulting Engineers and Surveyors a consulting engineering firm with offices in Arvada and Longmont Colorado. Mr. Moore managed and directed multiple projects and employees in the fields of planning, civil engineering, structural engineering, marketing, business administration, land development, surveying, landscape architecture, water resources, design build and construction management.

During Mr. Moore's tenure with Jehn Engineering and Kidde Consultants he performed professional engineering duties encompassing civil and structural design, expert testimony, surveying, marketing, water resources, public presentations, project management, quality assurance and quality control. These professional engineering duties were performed for a diverse array of private and public clients and encompassed a broad spectrum of duties.

While employed by Fluor-Daniel Mr. Moore was a civil construction engineer on large power plant projects throughout the United States. Mr. Moore performed design-build civil engineering services on hydroelectric and gas plants in Virginia, Texas and Wyoming. These projects were in the hundreds of millions to billions of dollars in magnitude and were designed and built by Fluor-Daniel encompassing design, procurement, construction and implementation.

Education:

B.S., Civil Engineering
West Virginia University Institute of Technology, Montgomery WV 1974-1978

M.S., Civil Engineering
Colorado University, Boulder CO 1981-1983

Professional Registration:

Registered Professional Engineer, Maryland, # 15100; Nevada, # 19250; West Virginia; Wyoming, # 11010; Colorado # 22495; Alberta Canada # 98121

Career Experience:

CTL Experience – 1 year
Other – 29 years

DAVID E. MOORE, P.E. **Civil Department Manager**

Project Experience:

Residential Subdivisions and Commercial Sites

Mr. Moore has performed design, project management and construction management of numerous residential subdivisions and commercial sites in Maryland and Colorado. Residential subdivisions included small one to two lot subdivisions up to subdivisions with 400-500 lots. Commercial project experience includes banks, restaurants, multi-story commercial buildings, hotels, malls and car sale and maintenance facilities. These projects include annexation, zoning, planning, platting, road design, utility design, grading, drainage, storm water management, landscaping, development agreements, cost estimates, and construction.

Golf Courses

Mr. Moore was project manager, engineering designer and construction administrator for the City of Arvada West Woods Ranch public golf course encompassing an initial 18 holes and the later addition of nine more holes. This project also encompassed over 400 acres of residential development, design and construction of 1.5 miles of four-lane boulevard, major bridge design to pass 3500 cfs Ralston Creek, two miles of trail design, wetland mitigation, irrigation design pedestrian bridge and golf cart bridge designs.

Water Resources and Drainage Projects

Mr. Moore designed and performed construction administration on water resources and drainage projects for developers, builders, and municipalities, ditch companies and water districts. Practically every project requires a drainage report and plan encompassing storm water management, flood studies, Letters of Map Revisions (LOMAR's or CLOMAR's) or storm drain design. Several notable projects include the Ralston Creek/Croke Canal overpass, Church Ditch flow limiter, Farmers Highline Canal realignment, and various flood studies on creeks and rivers.

Landscape Architecture

Mr. Moore performed design of landscape plans on many residential and commercial projects including a design/build regional park for the Town of Erie, Colorado encompassing an all purpose athletic field, baseball field with bleachers, backstops and dugouts. Additional design build projects include Candlelight Ridge Estates (125 lots) and Ryan Ranch Subdivision (130 lots).

Colorado Department of Transportation Road Design

State road design projects include 2 miles of US 60 road design in Johnstown, Colorado; Platte River Bridge/Culvert replacement in Littleton, CO; US 119 road improvements in Black Hawk and Longmont Colorado and State Highway 52 road re-design in Boulder County, Colorado.

Seniors Housing

Design of senior housing projects include the Golden Pond Seniors Housing encompassing a campus of senior apartments, assisted living and Alzheimer's facilities in Golden, CO; Arvada Estates senior housing an 118 unit senior housing project in Arvada, CO; Broomfield Retirement an 118 unit senior housing project in Broomfield, CO and Orchard Gardens an 85 unit Alzheimer's facility in Arvada, CO.

Land Development

Mr. Moore has assisted many developers through the land development process as a consultant, owner and partner. Project experience includes preparation of feasibility studies, project proforma's, preparation of loan packages, negotiation of development agreements and construction administration. Notable projects include Ryan Ranch Subdivision in Jefferson County, Colorado; Candlelight Ridge in Erie, Colorado; Ridgeview Estates in Adams County, Colorado, and Legend Ridge in Niwot, Colorado.

Structural Engineering

Mr. Moore has performed structural design, inspections, retaining wall designs, and box culvert designs, on residential, commercial and public projects. Larger projects include the Ralston Creek Bridge, trail and equestrian underpass for the City of Arvada, CO; Platte Canyon Road box culvert replacement for the State of Colorado and the Sheridan Community College dormitory buildings in Sheridan, Wyoming.

Utility Projects and Pump Stations

Preparation of utility reports and design and construction of water and sewer transmission lines, holding ponds, buildings and pump station facilities for raw water, potable water and sewer for developers, utility districts and municipalities. Projects include the regional sewer pump station for the Clear View project in Johnstown, CO; the raw water reservoirs and pump station for the City of Arvada Church Ditch takeout project in Arvada, CO.

Power Projects

Mr. Moore was project civil/construction engineer on the 1.3 billion dollar Bath County Pumped Storage project for Virginia Electric and Power Company (VEPCO) and in Bath County, Virginia. This project involved two earthen dams of which one was the tallest earth fill dam in the world at that time, design and construction of the powerhouse, tunnels and related appurtenances. Mr. Moore was a civil/construction engineer on the Chevron Carter Creek Gas Project in Evanston, Wyoming. This project was a 500 million dollar gas purification facility that was designed and constructed to purify natural gas. On both projects Mr. Moore was in the field performing design, direction of field personnel, inspections, quality control, material and equipment procurement, and related civil engineering duties.

Professional Affiliations:

American Society of Civil Engineers
American Institute of Architects
Home Builders Association
Society of American Military Engineers

CARL G. SELFRIDGE

Geotechnical Engineer

EXPERTISE:

Annually manages 100+ various geotechnical projects; including transportation, commercial development, public schools, an d a variety of public and private clients. Directs all aspects of the geotechnical engineering for CTL WV. This includes the management of field drilling activities, field classification of soil, 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.

EDUCATION:

A.A.S., Mechanical Technology - Design & Drafting, 1991
Adirondack Community College; Queensbury, NY

A.S., Engineering Science, 1994
Adirondack Community College; Queensbury, NY

B.S., Civil Engineering (Geotechnical & Structural), 1996
Rensselaer Polytechnic Institute; Troy, NY

Graduate Studies, Civil Engineering (Geotechnical), 1996-1999
Rensselaer Polytechnic Institute; Troy, NY

REGISTRATIONS / CERTIFICATIONS:

Engineer Intern (EI): New York, 1996
Pennsylvania Dept of Transportation Level II Drilling Inspector, 1999
ARC Adult CPR Trained, Expires: 08/30/2006
ARC First Aid Trained, Expires: 08/30/2008
CSX Transportation Contractor Safety Trained, Expired: 2004
Mine Safety Trained (Construction), Expired: 2003
AMTRAK Contractor Safety Trained, Expired: 2001

CAREER EXPERIENCE:

CTL Experience – 3 years
Other Engineering – 8 years

Project Experience:

US Route 35 Little Fivemile Creek to Coast Guard Station, Mason County, WV, *R. D. Zande / West Virginia Department of Transportation, Division of Highways.* Geotechnical Engineer responsible for the site reconnaissance, core boring program bid documents, geotechnical site investigation program, laboratory testing program.

Dolls Run Bridge Replacement, Monongalia County, WV, *West Virginia Department of Transportation, Division of Highways.* Geotechnical Engineer responsible for the site reconnaissance, geotechnical site investigation program, core boring bid documents, laboratory testing program, geotechnical analysis and prepared recommendations, prepared Geotechnical Engineering Report.

King's Covered Bridge Rehabilitation, Somerset County, PA, *Simone Jaffe Collins (SJC) / Pennsylvania Department of Transportation, District 9-0.* Engineer responsible for the inspection and documentation of the current conditions and details of historic wood timber covered bridge.

WV 705 Connector Alternative Study, Monongalia County, WV, *West Virginia Department of Transportation, Division of Highways.* Geotechnical Engineer responsible for performing site reconnaissance of the project area and evaluated the existing site conditions as they may pertain to the design of different proposed alternatives.

King Coal Highway (US Route 52) with WV Route 65 Relocation, Mingo County, WV, *Nicewonder Contracting, Inc. / West Virginia Department of Transportation, Division of Highways.* Geotechnical Engineer responsible for geologic reconnaissance, geotechnical site investigation program, site mining issues, cut slope analysis and design, very large embankment fills analysis and design, and other geotechnical design and analysis.

S.R. 0040, Section 06M, Youghiogheny Bridge Replacement over the Youghiogheny Reservoir, Fayette and Somerset Counties, PA, *WAGMAN, Inc. / Pennsylvania Department of Transportation, District 12-0.* Geotechnical Engineer responsible for conducting on-site geotechnical investigation and analyses of subsurface information for a proposed alternate replacement bridge structure over the Youghiogheny Reservoir.

S.R. 885, Section A03, Boulevard of the Allies Bridge Replacement over Forbes Avenue, Pittsburgh, PA, *Pennsylvania Department of Transportation, District 11-0.* Geotechnical Engineer responsible for conducting on-site geotechnical investigation and performed analyses of the subsurface investigation information for use in the design and analysis of two replacement bridge structures, new roadways and six retaining walls.

Osage Mine Complex Reclamation, Monongalia County, WV, *West Virginia Department of Environmental Protection.* Geotechnical Engineer responsible for assisting with preliminary field and office site reconnaissance for the preparation of construction plans and specifications for the reclamation of five abandoned mining sites under the Abandoned Mine Lands and Reclamation Program.

Lick Run Bridge (LC09), and Scotia Hollow Bridge (XC01), Allegheny County, PA, *County of Allegheny.* Geotechnical Engineer responsible for assisting with the preparation of the Problem Statement and Draft Exploration Plan for preliminary and final design activities for the rehabilitation or replacement of the two bridges in the Allegheny County Bridge Design Group B.

Martins Ferry Water System Improvement Project, Belmont County, OH, *City of Martins Ferry.* Geotechnical Engineer responsible for the geotechnical site investigation, subsurface investigation program, mine subsidence investigation, cut-and-fill slope stability review and analysis, embankment settlement analysis, and geotechnical design and analysis

Thompson Run Road Bridge No. 2, Allegheny County, PA, *Allegheny County.* Geotechnical Engineer responsible for conducting the inspection of the subsurface investigation program.

S.R. 0028, Galleria Mall Interchange, Allegheny County, PA, *Mills Corporation.* Geotechnical Engineer responsible for conducting on-site inspection and analyses of a subsurface investigation for a new interchange on S.R. 0028.

Ambridge-Aliquippa Bridge Replacement, Beaver County, PA, *Pennsylvania Department of Transportation, District 11-0.* Geotechnical Engineer responsible for performing site reconnaissance and assessments of five alternative locations for a proposed new bridge to replace the existing Ambridge-Aliquippa Bridge that connects State Routes 65 and 51 over the Ohio River.

Midway Sewerage Treatment Plant, Washington County, PA, *Midway Sewerage Authority.* Geotechnical Engineer responsible for drilling inspection, subsurface analyses, and foundation analyses for the design and construction of a proposed sewerage treatment plant at an alternate site.

King Coal Highway, Mingo County, WV, *West Virginia Department of Transportation, Division of Highways.* Geotechnical Engineer responsible for geotechnical site investigation, boring layout, drilling program, mine subsidence investigation, cut-and-fill slope stability review and analysis, embankment settlement analysis, and geotechnical design and analysis.

Sharon Heights Connector, Mingo County, WV, *West Virginia Department of Transportation, Division of Highways.* Geotechnical Engineer responsible for geotechnical site investigation, boring layout, drilling program, mine subsidence investigation, slope stability.

Southern Beltway, Findlay Connector, PA Route 60 to U.S. Route 22, Allegheny and Washington Counties, PA, *Pennsylvania Turnpike Commission.* Geotechnical Engineer responsible for reviewing boring logs and profiles, along with the proposed designed alignment geotechnical cross sections, plan views, and profiles for correctness and completeness.

Stage II Light Rail Transit System, Pittsburgh, PA, *Port Authority of Allegheny County.* Geotechnical Quality Control Inspector on the Construction Management Team assisting in monitoring geotechnical field activities of tieback anchor installations and load testing in soldier pile and lagging walls.

Source Water Assessment and Protection (SWAP) Program, Beckley District, WV, *West Virginia Department of Health & Human Resources, Bureau for Public Health.* Engineer responsible for performing wellhead delineation and assisting in preparing reports for 44 public water systems.

S.R. 2040, Curry Hollow Road Realignment, Allegheny County, PA, *Pennsylvania Department of Transportation, District 11-0.* Geotechnical Engineer responsible for conducting on-site inspection and analyses of the subsurface investigation for the proposed widening and realignment of approximately one mile of a four-lane roadway, including the replacement of a deteriorated bridge.

S.R. 3016, Section B02, Green Garden Road Bridge Replacement and Green Garden Road Realignment, Beaver County, PA, *Pennsylvania Department of Transportation, District 11-0.* Geotechnical Engineer responsible for slope stability analyses of embankment fill slopes and retaining walls, and for a settlement analysis of embankment fill into wetlands, as part of a roadway alignment and bridge replacement project.

S.R. 3088, Section A01, Hookstown Grade Road Bridge, Allegheny County, PA, *Pennsylvania Department of Transportation, District 11-0.* Geotechnical Engineer assisting with the technical preparation of a final geotechnical engineering report (GER) of a ten-meter-long single-span adjacent box beam bridge to replace a deteriorated single-span bridge.

Structural Stabilization and Rehabilitation Grouting Program, United States Postal Service Eastpointe Facility, Clarksburg, WV, *United States Postal Service (USPS)/Advanced Construction Techniques, Ltd. (ACT).* Resident Quality Control Engineer responsible for inspecting and monitoring on-site construction activities for a single-story structure used as a mail transfer facility and post office.

Sinkhole Remediation, Bridgeport Wastewater Treatment Plant, Bridgeport, PA, *Borough of Bridgeport.* Geotechnical Engineer responsible for inspecting the drilling and installation of four new groundwater monitoring wells, and for assisting with the investigation of the causes of sinkhole formation at a wastewater treatment plant.

S.R. 0202 Improvement Project, Section 404, Chester and Montgomery Counties, PA, *Pennsylvania Department of Transportation, District 5-0.* Geotechnical Engineer responsible for the analysis of bridge foundation piles for down-drag and alternative design options for bitumen coating. Also designed a cased-bentonite mix around the pile in the zone of negative skin friction.

PI 125, Orms Street Bridge, Providence, RI, *Amtrak.* Geotechnical Engineer responsible for the 90 percent design and analysis of a jet grouting underpinning specification for the temporary support of a stone masonry retaining wall while lowering the tracks along the face of the wall.

S.R. 0309, Section 100, Montgomery County, PA, *Pennsylvania Department of Transportation, District 6-0.* Geotechnical Engineer for the widening and realignment of five miles of a four-lane expressway.

S.R. 0222, Warren Street Bypass, Section 002, Berks County, PA, *Pennsylvania Department of Transportation, District 5-0.* Geotechnical Engineer responsible for conducting technical reviews and preparing comments for District 5-0 on geotechnical reports submitted by the design consultants.

PI 125, Crib Wall at Mineral Springs Avenue, Pawtucket, RI, *Amtrak.* Geotechnical Engineer responsible for assisting in the evaluation of alternatives for supporting a crib wall structure during the lowering of the tracks along its face.

PI 126, Track 4 Extension, Attleboro, MA, *Amtrak.* Geotechnical Engineer responsible for the evaluation and analysis of consolidation settlement of a peat layer in the evaluation of the peat to support the proposed new track.

Instrumentation Monitoring, Northern Solid Waste Management Center B 2 at Cherry Island, Wilmington, DE, *Delaware Solid Waste Authority.* Geotechnical Engineer assisting in the quarterly and monthly monitoring and maintenance of 300 geotechnical instruments at this landfill which is constructed on 70 feet of soft dredge spoils. Instrumentation includes settlement plates and the use of an inclinometer probe.

Longwood Gardens Service Road Underpass, Kennett Square, Chester County, PA, *Longwood Gardens, Inc.* Geotechnical Engineer responsible for performing site reconnaissance and the preparation of the reconnaissance soils and geological engineering report (RSGER) for a simple-span, prestressed concrete box beam bridge for S.R. 0926 over a proposed maintenance driveway.

S.R. 0202 Improvement Project, Section 400, Chester and Montgomery Counties, PA, *Pennsylvania Department of Transportation (PennDOT), District 6-0.* Geotechnical Engineer responsible for assisting with the evaluation and organization of hydrologic information used to evaluate stormwater runoff and its influence on groundwater infiltration at drainage structures and wetland areas.

Liberty Street, Clinton, CT, *Amtrak.* Geotechnical Engineer responsible for drilling inspection and stability analysis of an existing road bridge abutment for the Amtrak Northeast Corridor High-Speed Rail Improvement Project.

Buttonball Road, Old Lyme, CT, *Amtrak.* Geotechnical Engineer responsible for drilling inspection and stability analysis of an existing bridge abutment for the Amtrak Northeast Corridor High-Speed Rail Improvement Project.

Lake Road, East Haven, CT, *Amtrak.* Geotechnical Engineer responsible for drilling inspection and stability analysis of the existing road bridge abutment for the Amtrak Northeast Corridor High-Speed Rail Improvement Project.

Ferry Street, New Haven, CT, *Amtrak.* Geotechnical Engineer responsible for drilling inspection and stability analysis of an existing road bridge abutment for the Amtrak Northeast Corridor High-Speed Rail Improvement Project.

I-95, East Haven, CT, *Amtrak.* Geotechnical Engineer responsible for the geotechnical exploration of a bridge pier for the Amtrak Northeast Corridor High-Speed Rail Improvement Project.

PROFESSIONAL AFFILIATIONS:

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

JAMES P. GOWARTY, JR. *Construction Services Manager*

Expertise:

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 Fall 2008.
Mr. Gowarty is CTL's USNRC Safety Officer.

Education:

B.S., Civil Engineering Technology, 1990
Fairmont State College; Fairmont, West Virginia

A.S., Mechanical Engineering Technology, 1990
Fairmont State College; Fairmont, West Virginia

Professional Registrations/ Certifications:

Safety

Radiation Safety Training, CPN Corporation
Radiation Safety Officer Training, Troxler Electronics
Principals of Fire Protection, Fairmont State University
Certified Forklift Trainer, Brickstreet Insurance
Drug Free Workplace Employee Trainer, Working Partners
Drug Free Workplace Supervisor Trainer, Working Partners

Other

West Virginia DOT Certified Compaction Technician
West Virginia DOT Certified Bituminous Concrete Technician
West Virginia DOT Certified Portland Cement Concrete Technician
West Virginia DOT Certified Aggregate Sampler
NICET Level III Asphalt & Concrete
NICET Level II Soils
Certified Dipfloor Profiler Operator, Face Company

Career Experience:

CTL Experience – 21 years

JAMES P. GOWARTY, JR. *Construction Services Manager*

Project Experience:

Power Facilities

Hatfield Power Station, Masontown, PA
Albright Power Station, Albright, WV
Pleasants Power Station Landfill, Willow Island, WV
Blackoak Substation, Allegany County, WV
Fort Martin Power Station, Morgantown, WV
Linden Substation, Front Royal, VA
Malden Substation, California, PA
Graymont Substation, Pleasant Gap, PA
Grable Substation, Washington, PA
Meadowbrook Substation, Stephens City, VA
Maidstone Substation, Berkeley County, WV
Lamberton Substation, Ellenboro, WV
Lake Lynn Power Station, Lake Lynn, PA
Mitchell Substation, Monongahela, WV
Fayette Energy Facility, Masontown, PA
Warrior Run Company, Generation Plant, Cumberland, MD
Harrison Power Station, Haywood, WV
John Amos Power Plant, Nitro, WV
Grant Town Power Plant, Marion County, WV

Transportation

Monongahela Blvd, Morgantown, WV
Route 7, Morgantown, WV
Various Projects for WVDOT, WV
Colonial Drive Roadway Evaluation, Waynesburg, PA
I-79 Paving, Morgantown, WV
Clarksburg Streetscape, Clarksburg, WV
High Street Streetscape, Morgantown, WV
Mont Chateau Road Paving, Cheat Lake, WV
Route 50 Paving, Preston County, WV
Route 72 Paving, Preston County, WV
WVU Research Park Roadway, Morgantown, WV
Route 250 Gradations, Fairmont, WV
Hunter Lane Paving Project, Morgantown, WV
WVU Route 705, Morgantown, WV
Route 20 Utility Compaction, Pineville, WV
Osage Bridge S331-19-01.98, Morgantown, WV
WVDOT Bridge Replacement, Grant Town, WV
Mon Fayette Expressway, Cheat Lake, WV
Morgantown Airport, Morgantown, WV
Marshall County Airport, Moundsville, WV

Blue Sulphur Bridge, Ona, West Virginia

Education

South Jefferson High School, Charles Town, WV
Waynesburg College Eberly Hall, Waynesburg, PA
Waynesburg College Benedum Hall, Waynesburg, PA
Petrograph West Taylor Elementary School, Flemington, WV
Clay Battelle School, Blacksville, WV
WVU Wise Library, Morgantown, WV
WVU Life Sciences Building, Morgantown, WV
WVU Student Recreation Facility, Morgantown, WV
Suncrest Junior High School Construction Project, Morgantown, West Virginia

Healthcare

Monongalia General Hospital, Pavement Investigation, Morgantown, WV
WVU Hospitals, Pt. Marion Road, Morgantown, WV

Building Development

Kohl's Shopping Center, Pavement Coring, Clarksburg, WV
Super Wal-Mart, Fairmont, WV
Eastpointe Commercial Development, Harrison County, WV
Avery Church, Morgantown, WV
Fairmont Federal Credit Union, Bridgeport, WV
Rite Aid, Westover, WV
FedEx Ground Facility, Clarksburg, WV
Centra Bank, Westover, WV
Bridgeport Development, Bridgeport, WV
Little Caesars, Washington, PA
GA Brown Hi Tech Building, Fairmont, WV
Super Wal-Mart, Kingwood, WV
Japanese Steakhouse, Morgantown, WV
United Federal Credit Union, Mount Pleasant, PA
Kroger, Suncrest Town Center, Morgantown, WV
Hampshire County Judicial Center, Romney, WV
Evergreen Technology Park, Waynesburg, PA
Beckley Federal Courthouse, Beckley, WV
Glenmark Centre, Morgantown, WV
Newpointe Center, Clarksburg, WV

Water/Wastewater Treatment Plants and Water Tanks

Cheat Lake Wastewater Treatment Plant Expansion, Morgantown, WV
Chaplin Hill Sewer and Water System Expansion, Morgantown, WV
Olive Water Tank, Harrison County, WV
Pine Grove Waterline, New Martinsville, WV

PENINSULA HIGHWALL #1 & #2
DEP 14233

HIGHWALL & SUBSIDENCE RECLAMATION – MINE SEALS

CTL Engineering Inc.

Morgantown, Monongalia County, West Virginia

CTL Professional Services

- Surveying
- Geotechnical
- Civil Site Design
- Construction Documents

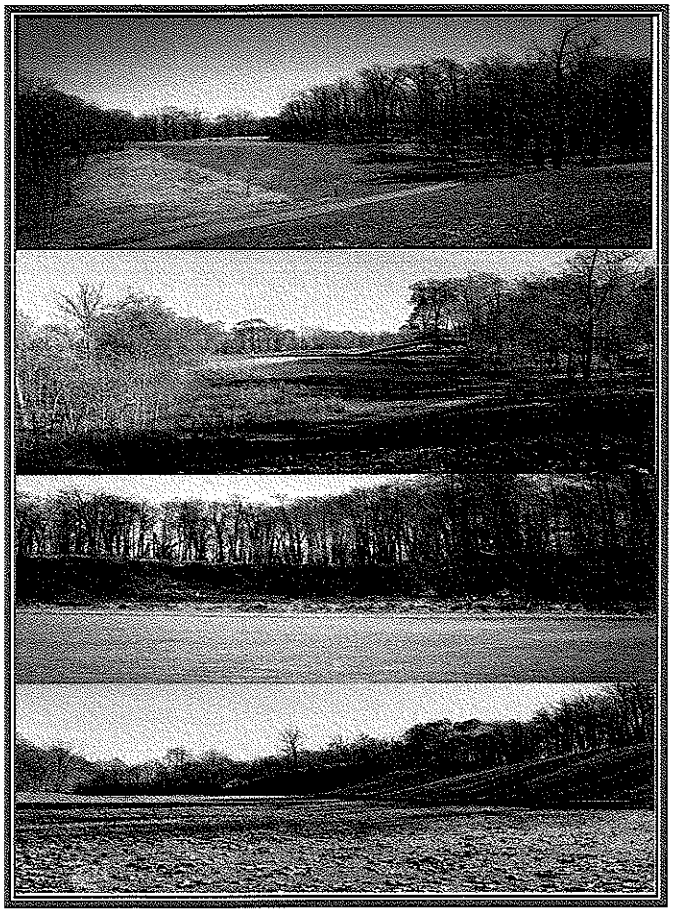
Project Background

This site contained 1,800 LF of vertical to sloughed highwalls 15 to 25 feet high, 7 partially of totally collapsed mine portals, 1 open mine portal, subsidence depressions behind the portals and water present at or flowing from the portals.

Project Scope

CTL Engineering of West Virginia, Inc. was retained to provide the following design:

- 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
- Conditioning and revegetation of all disturbed areas



Client / Contact
WV DEP-AML&R
601 57th Street
Charleston, WV 25304

Design Completion Date
November 2009

Estimated Construction Cost
$219,000

CHEAT NECK (LENHART) LANDSLIDE DEP14233

LANDSLIDE, MINE PORTALS & MINE DRAINAGE

CTL Engineering Inc.

Morgantown, Monongalia County West Virginia

CTL Professional Services

- Surveying
- Geotechnical
- Civil Site Design
- Construction Documents

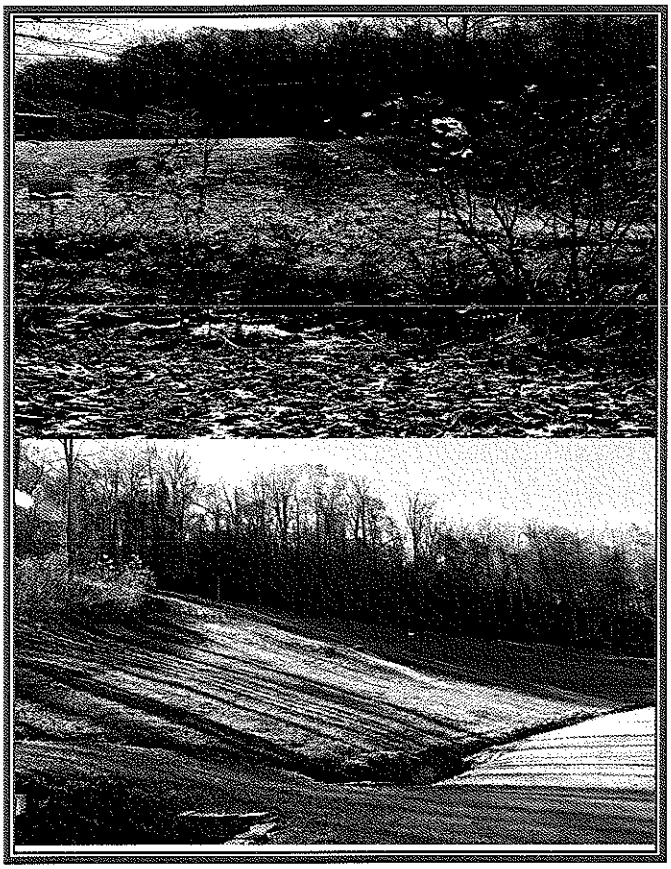
Project Background

Drainage from two collapsed deep mine portals located behind the Lenhart residence created a small landslide. The slide measured about 50' wide and 80' long and the toe was within 20' of the residence and 10' of the LP gas tank.

Project Scope

CTL Engineering of West Virginia, Inc. was retained to provide the following design:

- Regrade and or removal of the slipping material
- Excavation, dewatering and wet seal of each deep mine portal
- Drainage control channels to carry water off site
- Conditioning and revegetation of all disturbed areas



Client / Contact
WV DEP-AML&R
601 57th Street
Charleston, WV 25304

Design Completion Date
June 2009

Estimated Construction Cost
$175,000

ST. CLAIR PORTALS DEP 14233

MINE PORTALS, COAL REFUSE, HIGHWALLS & MINE DRAINAGE

CTL Engineering Inc.

Morgantown, Monongalia County, West Virginia

CTL Professional Services

- **Surveying**
- **Geotechnical**
- **Civil Site Design**
- **Construction Documents**
- **Natural Stream Design**

Project Background

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 mgl. A 35' to 45' high refuse pile was in the middle of the site as well as scattered refuse throughout the site.

Project Scope

CTL Engineering of West Virginia, Inc. was retained to provide the following design:

- 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
- Backfill of highwalls using spoil material to original contour
- Conditioning and revegetation of all disturbed areas

Client / Contact

WV DEP-AML&R
601 57th Street
Charleston, WV 25304

Design Completion Date

March 2010

Estimated Project Cost

$1,500,000

AARON'S RUN AMD PROJECT

ACID MINE DRAINAGE TREATMENT SYSTEM

CTL Engineering Inc.

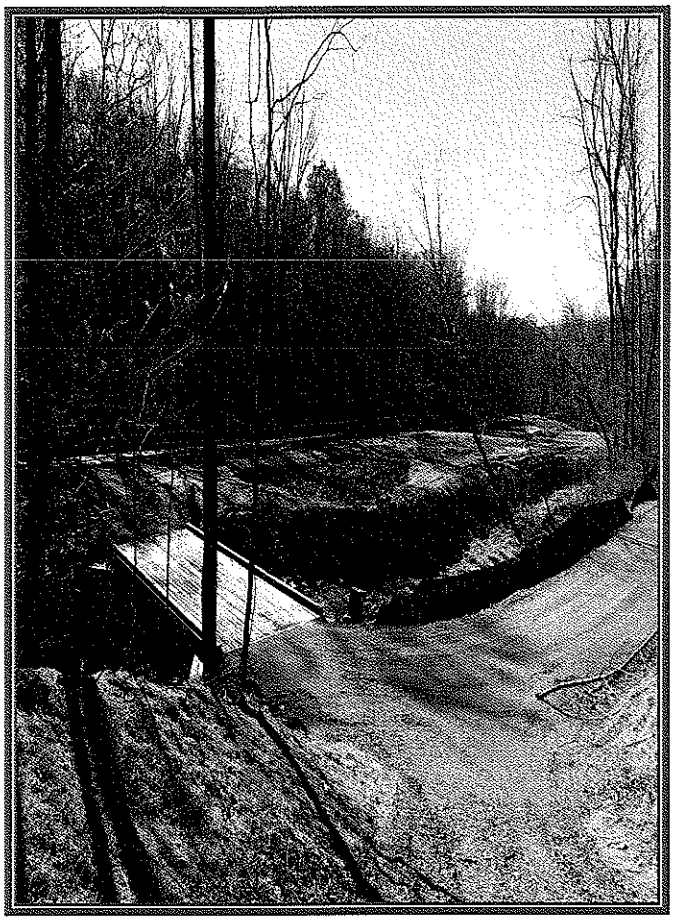
Location: Garrett County, Maryland

CTL Professional Services
Site Review & Reconnaissance
Surveying & Mapping
Civil Site Design
Permiting including USACOE, MDE Wetland, MDE S&E
Construction Specifications

Project Scope

CTL Engineering of West Virginia, Inc. was retained to provide the following design:

- Multiple AMD Treatment Systems
- 2 SAP Cells
- Slurry Doser
- Settling Ponds
- Natural Wetlands
- Full Site Grading Plans & Drainage Controls
- Access Road & Highway Rated Bridge
- All State & Federal Permitting
- Construction Specifications and Drawings



Client / Contact
MDE AML Program
160 South Water Street
Frostburg, MD 21532
Design Completion Date
October 2009
Estimated Construction Cost
$ 450,000

GENERAL CLAY #1 ODNR IM-0455

HIGHWALL RECLAMATION – POND & DRAINAGE CONTROL

CTL Engineering Inc.

Location: Wadesworth, Medina County, Ohio

CTL Professional Services
Surveying
Civil Site Design
Hydrology
Construction Specifications

Project Scope

CTL Engineering of West Virginia, Inc. was retained to provide the following design:

- Remediate existing highwalls
- Regarding slopes to minimize highwall areas
- Provide positive drainage from the site
- Removal of low lying areas and diversion ditches
- Sealing of existing pond outlets
- Installation of new pond outlets
- Temporary erosion and sedimentation controls

Client / Contact
ODNR - FORFEITURE
2050 East Wheeling Ave.
Cambridge, OH 43725

Design Completion Date
June 2008

Estimated Construction Cost
$322,000

GENERAL CLAY #2 ODNR IM-0021

HIGHWALL RECLAMATION – DRAINAGE CONTROL

CTL Engineering Inc.

Location: Summit Station, Hocking County, Ohio

CTL Professional Services
Surveying
Civil Site Design
Hydrology
Construction Specifications

Project Scope

CTL Engineering of West Virginia, Inc. was retained to provide the following design:

- Remediate existing highwalls
- Regarding slopes to minimize highwall areas
- Provide positive drainage from the site
- Removal of low lying areas and diversion ditches
- Removal and offsite disposal of existing culvert
- Installation of new 18-inch PE-PVC culvert
- Temporary erosion and sedimentation controls
- Two zero discharge runoff berms

Client / Contact
ODNR - FORFEITURE
2050 East Wheeling Ave.
Cambridge, OH 43725

Design Completion Date
March 2008

Estimated Construction Cost
$149,000

McCOURT LANDSLIDE ODNR CL-Yc-09-F

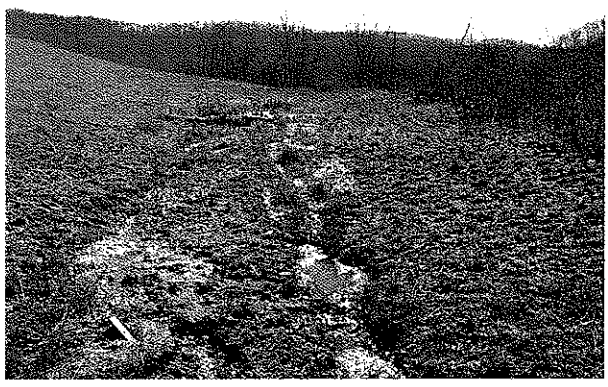
LANDSLIDE STABILIZATION

CTL Engineering Inc.

Location: Yellow Creek Twp., Columbiana County, Ohio

CTL Professional Services

Site Review & Reconnaissance
Surveying & Mapping
Geotechnical Evaluation
Slope Stability
Civil Site Design
Construction Specifications



Project Scope

CTL Engineering of West Virginia, Inc. was retained to provide the following design:

- Remediate existing landslide area by regarding slopes
- Toe Key Design
- Provide positive drainage from the site
- Provide multiple bonding benches
- Underdrain for site
- Temporary erosion and sedimentation control

Client / Contact

ODNR - FORFEITURE
2050 East Wheeling Ave.
Cambridge, OH 43725

Design Completion Date

November 2008

Estimated Construction Cost

$ 101,700

WV DEP - LANDFILLS

MONITORING WELLS - INSTALLATION, REDEVELOPMENT & ABANDONMENT

CTL Engineering Inc.

Statewide West Virginia

CTL Professional Services
Geotechnical Drilling
Monitoring Well Expertise

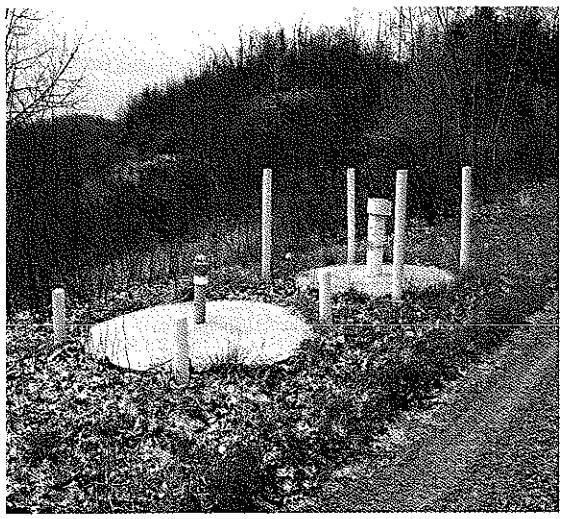
Project Background

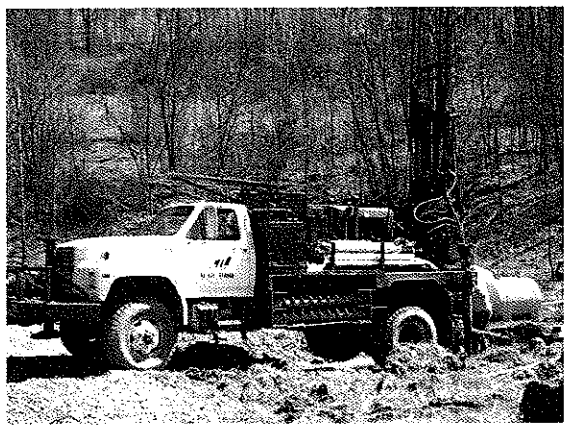
The State of West Virginia is in the process of closing various landfills throughout the state. These sites are required to have water monitoring wells in place to measure the quantity and quality of ground water flowing from and around these facilities. New monitoring wells are required, as well as redevelopment of existing wells that for various reasons have been found to be ineffective but usable. A large quantity of existing monitoring wells were required to be abandoned as found not im compliance with current WVDEP Monitoring Well regulations.

Project Scope

CTL Engineering of West Virginia, Inc. was retained to provide the following services:

- Provide West Virginia Certified Water Well Drillers with monitoring well expertise for 16 landfills located in 15 counties throughout the State of West Virginia
- Installation of 29 new monitoring wells
- Redevelopment of 28 existing Monitoring wells
- Evaluation of existing wells to determine whether to redevelop or abandon such wells
- Abandonment of 37 existing monitoring wells
- Installation & Redevelopment included drilling, measuring surge, and well head development for each well.





Client / Contact
WV DEP-Waste Management
601 57th Street
Charleston, WV 25304

Project Completion Date
March 2010

Estimated Project Cost
$1,000,000

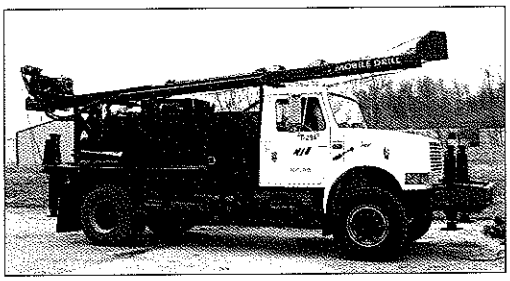
Firm's Equipment

Geotechnical Equipment

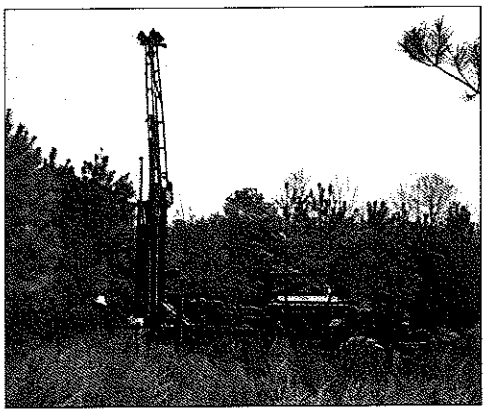
CTL Engineering Inc.'s subsurface exploration equipment is adaptable for use of barges or all terrain vehicles (ATV's). CTL can mobilize special equipment or a fleet of drilling rigs to a particular project requiring multiple units. CTL Engineering owns and operates ten (10) drill rigs with a capacity of drilling to a depth of 300 feet. Other equipment includes large diameter soil and rock core sampling equipment, in-situ pressure meters and cone penetrometers.

CTL's drill rigs are rotary drilling rigs equipped to conduct standard split-spoon sampling with the use of hollow-stem augering, casing advancer or mud rotary. The rigs are also equipped with Moyno pumps, wire-line or standard coring equipment for proper and efficient execution of a subsurface investigation program

For field and laboratory materials analysis, CTL is equipped to conduct pressure meter tests, vane shear tests and cone penetrometers tests in the field. The laboratory is equipped with consolidometers, triaxal and direct shear apparata, permeability devices and normal soils classification equipment.



CTL owns and operates a fleet of ten (10) drill rigs



CTL's ATV can drill in rough terrain

Chemistry Laboratory

The chemistry laboratory at CTL is equipped with Atomic Absorption equipment, spectrophotometers and gas chromatography equipment. CTL has the capability of and regularly performs both non-hazardous and hazardous waste tests.

CTL has established a quality control/ quality assurance plan, which is based on The American Council of Independent Laboratory Standards. CTL carries professional liability insurance coverage with a limit of $1,000,00 per occurrence and aggregate.

Computer Resources

Operating efficiency may mean the difference between successful project completion and job overruns. At CTL Engineering, Inc., we effectively utilize computer software programs to assist in project and account management, resource allocation, data transfer, and preparation of plans and specifications. CTL's use of innovative technology sets us apart from the competition.

CADD Capabilities

Project designs and specifications are produced in our Computer Aided Drafting and Design (CADD) section using all releases of ACADD, including Release 2008. AutoCAD allows the user to interact with a wide variety of support software to modify project designs or perform different modeling functions. In addition, many public documents or plans are available in digitized form allowing CTL to directly download surveyed land plots or utility drawings. Successful use of CADD-based documents and/or plans has dramatically increased CTL's project efficiency and performance.

Geotechnical Software

CTL's Geotechnical Department utilizes a wide array of computer models to analyze deep foundation design, pavement design, slope stability, hydraulics, and flood hazard evaluation. Our experienced engineers use the following software to develop solutions:

AASHTO - Rigid and Flexible Pavement Design
APILE - Calculation of Load-Settlement
COYLE - Analysis of Axially Loaded Piles
DSS – Dimension Solution Software
ELSYM5 - **Elastic** Layered System Pavement Design and Analysis
GINT – Boring Logs & Lab Testing
HY8 - Culvert Analysis
HY9 - Bridge Scour Analysis
HWY - Asphalt Institute Pavement Design
LPILE - Analysis of Laterally Loaded Piles
NEWNEG - Analysis of Piles Subjected to Negative Skin Friction
RETWALL - Design of Cantilever and Gravity Retaining Walls
SCHMERT - Analysis of Shallow Foundations in Sand
SHAFT - Analysis of Drilled Shafts (Caissons)
STABL6 - Slope Stability Analysis
WEAP - Pile Driving Analysis
WSPRO - Water-surface Profile Computation Model

Civil Engineering Software

Eagle Point Watershed Modeling & Water Surface Profiling
DCA Civil Engineering Design Software
Civilsoft
Groundwater for Windows
TR-55
Swamp
HEC 1 and 2
Survey 3.0

Hydrogeologic Studies

The backbone of many hydrogeologic studies is the determination of ground water properties, flow direction, and effects of local ground water pumping or injection. CTL is experienced in utilizing a wide variety of computer models to predict various properties of ground water and ground water flow to include:

MODFLOW - USGS Finite element ground water model
MODPATH - USGS Particle tracker package for MODFLOW
SURFER - Data contouring package
CAPZONE - Semi-analytical ground water mode
GWPATH - Flowpath tracker for ground water models
SLUGIX - Slug test analysis software
WHPA - Wellhead Protection area delineation

Remediation Models

CTL uses the latest in remediation technologies and computer models when preparing conceptual and full-scale remediation system designs. Today's programs allow our engineers to calculate engineering parameters (e.g., stripper efficiency, total dynamic head, air emissions, etc.) in minutes instead of several hours. This allows us to evaluate multiple technology applications operating at varying parameters. Some of the models CTL uses include:

ShallowTray - low profile aerator evaluation program
Stat - low profile aerator design
HyperVentilate - soil vapor extraction emission model
SoilVent - soil vapor extraction design model
Gast Blower Selection Program

Telemetry

CTL employees are experienced with a variety of remote data acquisition devices. These systems allow us to interface with the remediation systems and remotely operate, collect data, and troubleshoot potential operating problems. Auto dialers alert employees in the event of an emergency. Remote monitoring of the system minimizes system down time and ultimately saves the project money. CTL employees are experienced with:

Telmax II
RealFlex
SiteLink
SiteWindows

Accounting Software

CTL uses Wind2 accounting software for all of the services we provide. The project manager first constructs a budget from the information developed in the site-specific proposal. Critical pathways of construction are identified and individual tasks developed for implementing the proposed work. A project number is assigned and costs tracked to each phase, task, or subtask of the project. Monthly billing review reports are provided to the managers to control and assess the progress of the project.

General

CTL Engineering Inc. utilizes:

Windows based operating systems

Microsoft Office 2007 is used for word processing, spreadsheets creation, data processing, and presentation creation.
Alternative software including Corel Suite is available, if necessary.

AML and RELATED PROJECT EXPERIENCE MATRIX

PROJECT	Emp. Rents C=Corp. P=Personnel *	Additional Info Provided in Section (x) **	PROJECT EXPERIENCE REQUIREMENTS																	PRIMARY STAFF PARTICIPATION/CAPACITY *** dm=Management P=Professional					
			Abandoned Surface Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Adit Closure	Dewatering/Hydraulic Recharge	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Supply Evaluation/Replacement	Construction Inspection/Management	Water Treatment Equipment	Structure Removal	Stream Restoration	Geotechnical/Stability	PATRICK DALLASHER, P.E.	TIM DARNAM	JEFFREY HUFFMAN, P.E.	RICHARD MYATT, P.E.	DAVID MOORE, P.E.	CARL SELVAGGIO
TERRA HAUTE AIRPORT (WV AML '10)	C			X	X				X		X						X	MP	MP		P		P
KERMIL MINE CLOSURE (MD AML '10)	C		X	X	X						X							MP	MP		P		
FROSTBURG NORTH CLOSURE (MD AML '10)	C		X	X	X						X							MP	MP		P		
PEE WEE HILL WATER FEASIBILITY (WV AML '10)	C											X						MP	MP		P		P
WILLIAMS REFUSE PILE #2 (Private AML '10)	C		X			X	X			X	X	X	X	X			X					MP	
PENINSULA HIGHWALL 8 (WV AML '10)	C	Profile	X	X		X			X		X					X	X	MP	MP				P
ST. CLAIR PORTALS (WV AML '09)	C	Profile	X	X	X	X					X				X	X	X	MP	MP		P		P
CHRAT NECK LANDSLIDE (WV AML '08)	C	Profile			X	X					X						X	MP	MP		P		P
FARMINGTON UMC (WV DEP EMER. '08)	C								X		X							MP	MP				P
MORNINGSIDE BAPTIST (WV DEP EMER. '08)	C								X		X							MP	MP				P
COLLINS MINING (ODNR FOR. '08)	C		X								X							MP	MP				
FAIRVIEW WATER FEASIBILITY(WV AML '08)	C											X						MP	MP				
AARON'S RUN (MD AML '07)	C	Profile	X			X					X	X		X		X		MP	MP		MP		
ECCLES SUBSIDENCE (WV AML '06)	C								X		X						X	MP	MP		P		P
McARTHUR SUBSIDENCE (WV AML '06)	C								X								X	MP	MP		P		P
TIGGA WATER FEASIBILITY (WV AML '06)	C											X						MP	MP				
McCOURT LANDSLIDE(ODNR FOR. '06)	C	Profile	X			X					X						X	MP	MP				P
JONES BENCHING (ODNR FOR. '06)	C		X								X							MP	MP				
MILLER MINING (ODNR FOR. '06)	C					X					X	X						MP	MP				
ZILMAN CLOSURE (MD AML '06)	C			X	X						X							MP	MP				
CALOONIA HILL SLOPE STABILITY (MD AML '06)	C		X														X	MP	MP				
DOUGLAS WATER FEASIBILITY (WV AML '06)	C											X						MP	MP		P		P
PERMIT #20 HAULROAD LANDSLIDE (MD AML '07)	C																X	MP	MP				
STATEWIDE MONITORING WELLS (WV DEP '07)	C	Profile										X					X	MP					MP
TAIRIE (ODNR EMER. '07)	C		X								X						X	MP	MP				
GENERAL CLAY #1 (ODNR FOR. '07)	C	Profile	X								X							MP	MP				
GENERAL CLAY #2 (ODNR FOR. '07)	C	Profile	X								X							MP	MP				
CANNALVILLE REFUSE PILE (ODNR '04)	C		X								X						X	MP	MP				
MARK KEMPHER (Private AML '06)	C				X				X				X				X	MP	MP				P
LAWRENCE LANDSLIDE (ODNR EMER. '05)	C		X								X						X	MP	MP				
HITCHCOCK (ODNR EMER. '05)	C		X								X						X	MP	MP				
DAVOLLO (ODNR EMER. '05)	C		X								X						X	MP	MP				
ANGLE (ODNR EMER. '05)	C										X						X	MP	MP				
BRIDGE AMD PIEZOMETERS (WV DEP '03)	C																X	MP	MP				
LOST CREEK LANDSLIDE (WV DEP '03)	C																	MP	MP				
HORSEPEN RUN WATER FEASIBILITY (WV AML '03)	C											X						MP	MP				
MIDLOTHIAN ROAD (MD AML '01)	C			X					X								X	MP	MP				
TARTER FREEZE (MD AML '00)	C			X					X								X	MP	MP				
WEST VIRGINIA AMLR (2000 - 2010) 16 Projects	C								X								X	MP	MP				P
OMSMA (2005 - 2010) 47 Projects	C								X								X	MP	MP				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"