

EXPRESSION OF INTEREST

To provide Engineering Services
for the

Barker Portals & Strip Design Project
Barbour County, WV
RFQ# DEP14513

Prepared for:

WV Department of Environmental Protection
Office of Abandoned Mine Lands & Reclamation

RECEIVED

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Prepared by:

WV PURCHASING
DIVISION

CTL Engineering of West Virginia, Inc.

733 Fairmont Road
Morgantown, WV 26501
Phone: (304) 292-1135

510 C Street
South Charleston, WV 25303
Phone (304) 746-1140

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January 21, 2009

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

**Re: RFQ #DEP14513
Expression of Interest
Design Engineering Services Proposal
Barker Portals & Strip Design Project**

Gentlemen:

CTL Engineering of WV, Inc. is very pleased to present this proposal to provide geotechnical 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 past experience with refuse pile reclamation design in West Virginia extends back 20 years. Specifically, the Barker Portals & Strip Design Project is similar in scope to many of the more than 50 AML Design projects we have successfully

completed. Attached to this proposal are numerous examples of burning refuse and mine drainage control projects in West Virginia, including 4 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





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
 DEP14513

PAGE
 1

ADDRESS CORRESPONDENCE TO ATTENTION OF
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 304-558-2157

PROPERTY

RFQ COPY
 TYPE NAME/ADDRESS HERE
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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	FOB	FREIGHT TERMS
12/17/2008				

BID OPENING DATE: 01/22/2009 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		906-29		
BARKER PORTALS & STRIP 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 BARKER PORTALS & STRIP PROJECT IN BARBOUR COUNTY, WEST VIRGINIA, PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS. BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THIS CONTRACT IS AUTOMATICALLY NULL AND VOID AND IS TERMINATED WITHOUT FURTHER ORDER. ***** THIS IS THE END OF RFQ DEP14513 ***** TOTAL:						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Rayden Spauld</i>	TELEPHONE (304) 292-1135	DATE Jan. 21, 2009
TITLE Dir. Business Dev.	FEIN 55-063-1834	ADDRESS CHANGES TO BE NOTED ABOVE

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

STATE OF WEST VIRGINIA
Purchasing Division**PURCHASING AFFIDAVIT**

029

VENDOR OWING A DEBT TO THE STATE:

West Virginia Code §5A-3-10a provides that: 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.

PUBLIC IMPROVEMENT CONTRACTS & DRUG-FREE WORKPLACE ACT:

West Virginia Code §21-1D-5 provides that: Any solicitation for a public improvement construction contract shall require each vendor that submits a bid for the work to submit at the same time an affidavit that the vendor has a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the West Virginia Code. A public improvement construction contract may not be awarded to a vendor who does not have a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the West Virginia Code and who has not submitted that plan to the appropriate contracting authority in timely fashion. For a vendor who is a subcontractor, compliance with Section 5, Article 1D, Chapter 21 of the West Virginia Code may take place before their work on the public improvement is begun.

ANTITRUST:

In submitting a bid to any agency for the state of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the state of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the state of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the state of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company partnership or person or entity submitting a bid for the same materials, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

LICENSING:

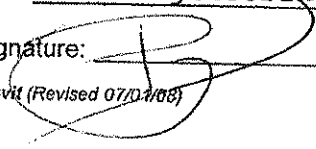
Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

CONFIDENTIALITY:

The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendors should visit www.state.wv.us/admin/purchase/privacy for the Notice of Agency Confidentiality Policies.

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

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

Authorized Signature: 

Date: January 21, 2009

Project Management Plan

Our approach to the **Barker Portals & Strip Design Project** will be similar to many other portal, refuse, highwall and site remediation projects we have designed. The Project Management Plan we have developed for this site is 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 site 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 site. 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.
- Simultaneous to the surveying, material sampling, and site investigative procedures will be completed in accordance with the project proposal and under the supervision of the Project Engineer/Geologist. 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.
- An evaluation of the site underground mine mapping will be undertaken to determine the mine pool locations and elevations.
- A geotechnical investigation shall be performed to delineate the mine pool and to determine and design the optimum wet seals for each of the open and collapsed portals. If required, piezometers shall be installed to monitor the mine pool and determine hydraulic head associated with the pools. This investigation shall be performed with a focus on safety to insure the safety of the local inhabitants and dwellings as well as the safety of the drilling and geotechnical personnel.

- Following completion of the surveying, field investigation, and material sampling, the analytical design work will begin. Design will include identification of on-site borrow for back fill of highwall, wet mine seal design, drainage design and requirements for removal of bridge structure to allow for final grading plan to be implemented.
- 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 will be impacted by the proposed design;
 3. Location and design of all necessary wet-seals for all portal sites.
 4. Borrow and/or fill location and grading plans
 5. Bridge removal and remediation specifications
 6. Reclamation and grading plans for total site
 7. Site Profiles;
 8. Cross Sections;
 9. Drainage system and control structures, with details;
 10. Survey control points; and
 11. Miscellaneous Site details.
- 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

Barker Portals & Strip Design

Install wet mine seals at portal locations

Install conveyance pipes, culverts and channels.

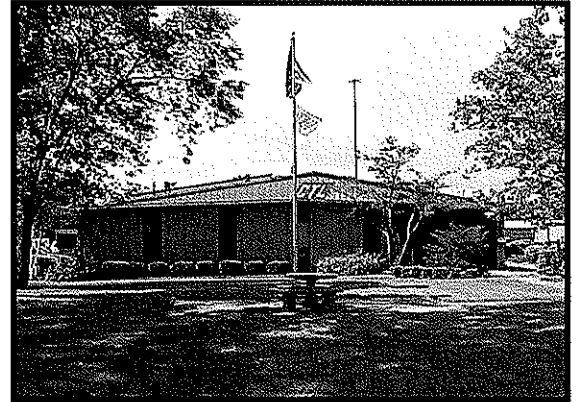
Cover exposed refuse

Backfill highwall

Remove steel bridge structure

Re-grade, condition, reforest and revegetate all areas disturbed during construction.

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 had been providing quality consulting engineering services for nearly 75 years. CTL Engineering of West Virginia will be celebrating it's 20th 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.



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.





Professional Services

Established 1927

Analytical Chemistry

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

Computer Technology

- ◆ Drafting Services
 - AutoCad
 - Digitizing
 - Microstation
- ◆ Software Development
 - Internet & Intranet
 - Application Software

Construction Monitoring

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

Environmental

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

Existing Structure Evaluation

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

Forensic Science

- ◆ Roofing Failures
- ◆ Building Failures
- ◆ Legal Testimony
- ◆ Product Liability Investigations
- ◆ Landslide, Soil and Foundation Failures
- ◆ Accident Reconstruction

Geotechnical

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

Materials Testing

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

Metallurgy

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

Mining Engineering

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

Nondestructive Testing & Inspection

- ◆ X-ray
- ◆ Level III Services
- ◆ Magnetic Particle Inspection
- ◆ Ultrasonic Inspections
- ◆ Liquid Penetrant Inspection

Pavement Management System

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

Product Testing

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

Roofing Engineering Services

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

Roof Management System

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

Site/Civil Engineering

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

Surveying & Mapping

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

Welding & Quality Control

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

Corporate Headquarters

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



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.

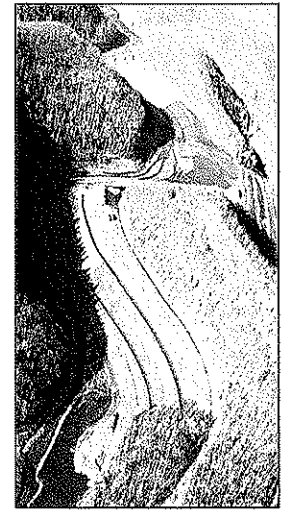
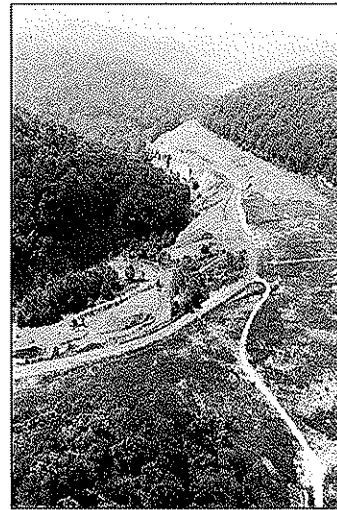
The CTL Mining Engineering Group coordinates with our drilling services and various testing departments to provide a full scope of services to the mining industry. Our laboratories are certified to perform the water and overburden analysis prescribed by federal regulatory programs.

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.

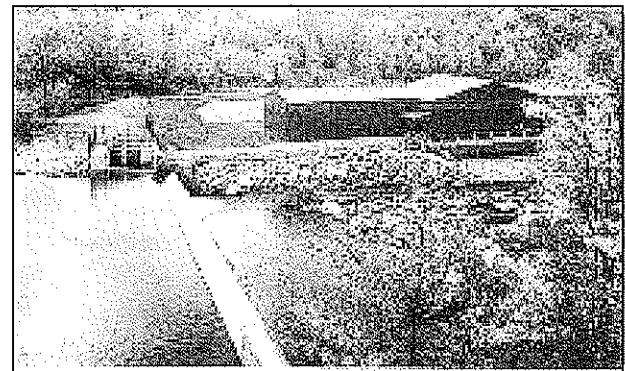
CTL Engineering has experienced mechanical and metallurgical engineers on staff to provide mine equipment evaluation and consultation services. CTL Engineering is a proven source for accurate and dependable technical information.

CTL Mining Services Include:

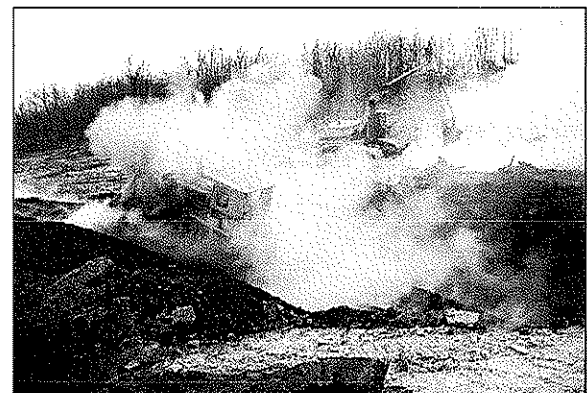
- ◆ Subsidence Investigations
- ◆ Abandoned Mine Reclamation Design
- ◆ Permit Preparation
- ◆ Mine Design Plan
- ◆ Refuse Disposal Facility
- ◆ Environmental Monitoring
- ◆ Coal, Water and Overburden Analysis
- ◆ Drainage Control Structure Design
- ◆ Failure Analysis
- ◆ Legal Testimony
- ◆ Acid Mine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

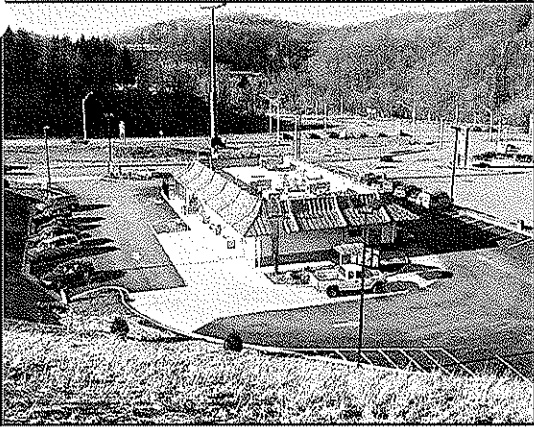


*Blackwater River, Water Improvement Project,
Davis, West Virginia*



Jamison Burning Refuse Reclamation Project

Surveying & Mapping



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

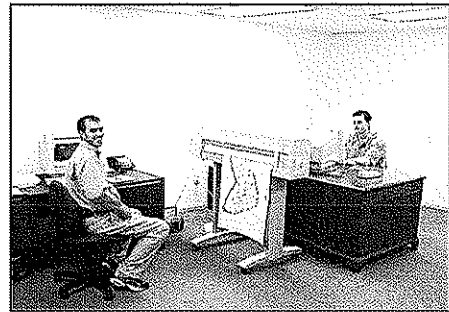
CTL Engineering, Inc. maintains a full service, in-house survey and mapping team which has extensive experience in performing most common surveying needs and some not so common.

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.

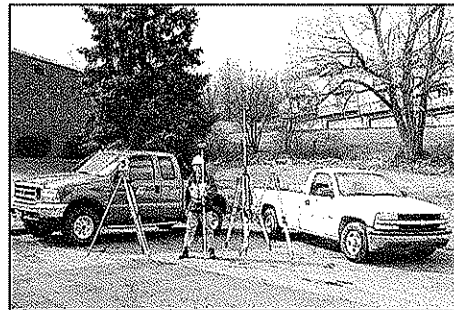
Professional Services:

- ◆ 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





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.

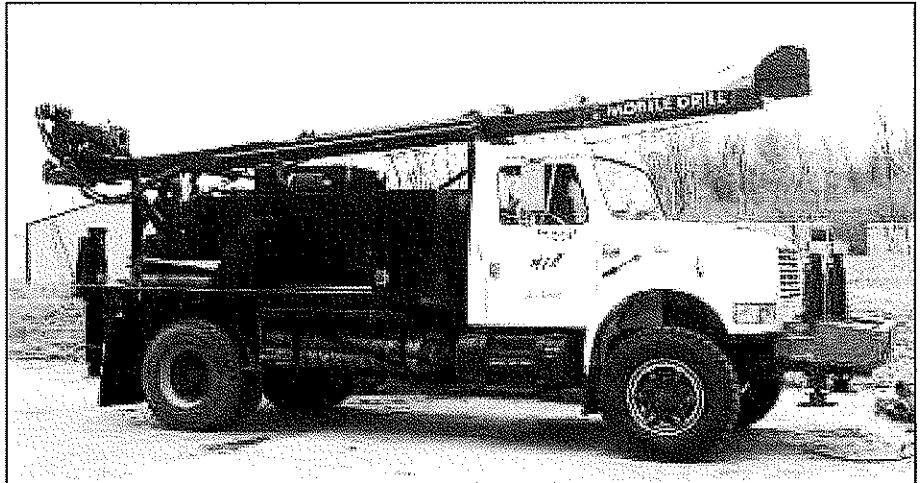
Drilling Services

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 shear apparatus, state-of-the-art permeability devices and normal soils classification equipment.

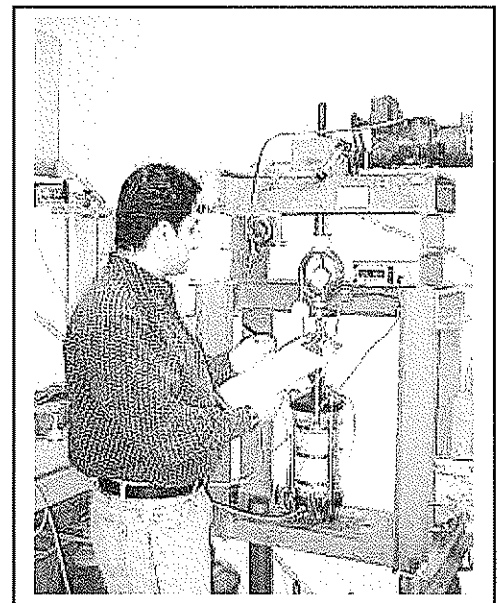
CTL Engineering provides a detailed analysis of the surface and subsurface composition and chemistry of the soils at the proposed site. For existing structures, we provide a foundation analysis. We also provide services for foundations under construction.



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

Services Include:

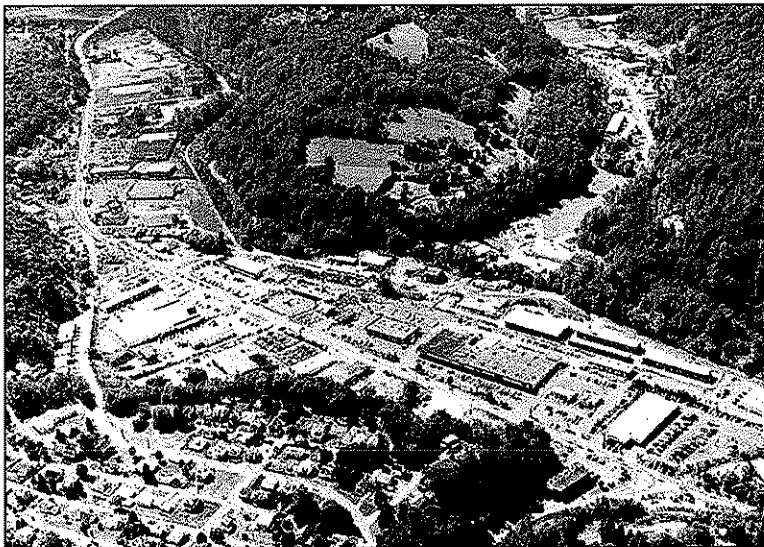
- ◆ Commercial Land Development
- ◆ Residential / Community Planning
- ◆ Infrastructure Planning & Design
- ◆ Pavement Design and Management
- ◆ Conceptual Designs / Presentations
- ◆ Recreational Resort / Facility Planning
- ◆ Erosion & Sediment Control Design
- ◆ Stormwater Management Systems
- ◆ Preliminary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



CTL Engineering's in-house staff provides a full array of services, with support from our Site/Civil Department, including mapping and surveying services.

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'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 West Virginia Department of Environmental Protection, the Division of Natural Resources, local fire and health departments, etc. Our personnel has conducted thousands of background researches and file reviews at numerous state agencies, 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, such 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 environmental scientists geologists, and hydrogeologists, 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:

Environmental Management

Compliance Strategies

- ♦ NPDES
- ♦ RCRA
- ♦ TSCA
- ♦ Solid Hazardous Waste
- ♦ Regulatory Analysis

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 Preparation
- ♦ Solid-Waste Landfill Permitting
- ♦ Construction Demolition and Debris Landfill Licensing
- ♦ Permit to Install (PTI)
- ♦ Permit to Operate (PTO)

Property Assessments

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

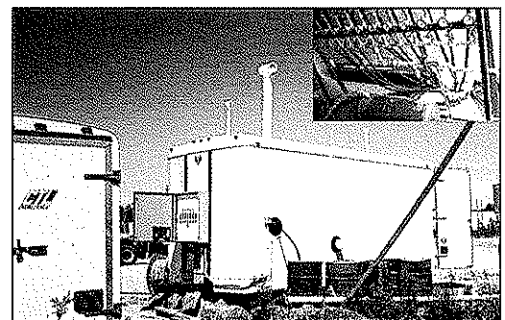
Environmental Restoration

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.

Geographical Information Systems

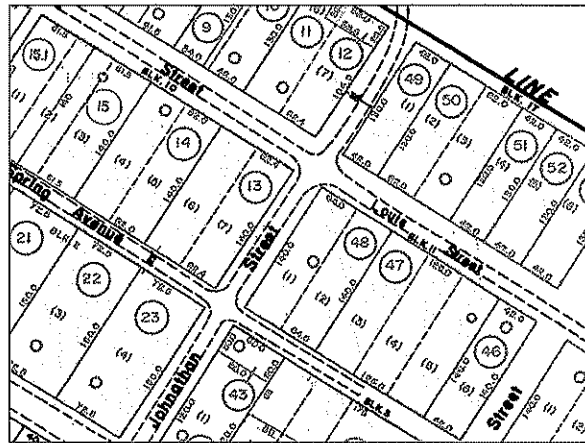
Too often sanitary and water utilities discover that paper maps and drawings are seriously outdated, incomplete, or even nonexistent. The problem is usually related to turn over of employees or engineers. The beginning of a utility database begins with GIS mapping of the infrastructure. Detailed base mapping can be created by scanning existing maps, importing CAD drawings, working from aerial photos, and surveying the location of infrastructure and utilities.

CTL Engineering offers these services:

- **Global Positioning Systems (GPS) Field Inventory**
- **Geodatabase Design**
- **Data Creation Services**
- **GIS/IT Integration**

GIS Technology can benefit these industries:

- **Infrastructure**
- **Water, Wastewater**
- **Storm Water**
- **Oil and Gas**
- **Mining**
- **Wetlands**
- **Electric utility**
- **Transportation**
- **Land/Urban Planning**
- **Strategic Planning**
- **Public Safety**
- **Emergency Management**
- **Forestry**
- **Facilities Management**
- **Forensics**



Every sector of a municipality can benefit from GIS mapping. CTL creates a phased mapping program that will reduce staff time, improve decision making, eliminate redundant data collection, improve record keeping and allow better asset management. CTL uses the latest version of ArcMap which allows importing of all current data formats to build a comprehensive database for the future. This database can be maintained and developed to enhance emergency response when public water/wastewater service is an issue. Also, planning and funding of new projects can be effectively prioritized.

CTL's GIS professionals use recent aerial photography and existing utility maps for base maps in order to direct surveying activities. We also add location specific supporting information from a



variety of sources. Over time, CTL can create precise mapping which will allow your municipality to plan accordingly for the challenges and changes you will face.

Supporting Services

- **Surveying/ Mapping**
- **Civil/ Site Design**
- **Environmental**
- **Geotechnical**
- **Construction Management**
- **Materials Testing**
- **Analytical Laboratory**

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

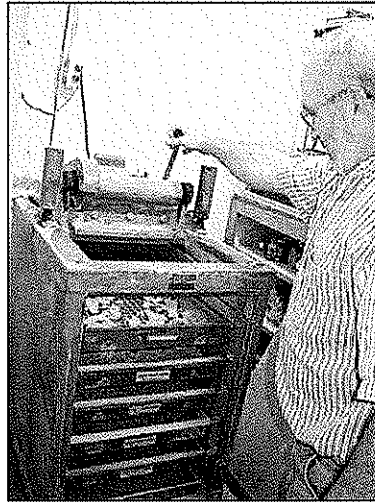
- Component Analysis (sand, gravel, limestone) – Department of Transportation
- Filter Sand – Environmental Protection Agency (EPA)
- Railroad Ballast – American Railroad Engineering Association
- Rip-Rap – U.S. Soil Conservation Service

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.

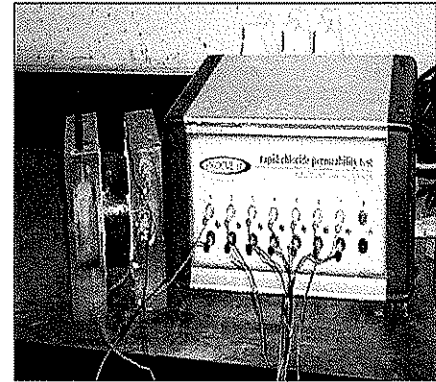
These specialized microscopic evaluations allow us to closely evaluate concrete quality and determine the causes and extent of failures in concrete, in addition to potential future performance.

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 of your construction mixes.



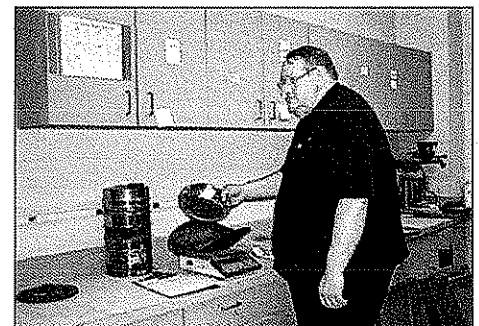
Rapid Chloride Permeameter

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.





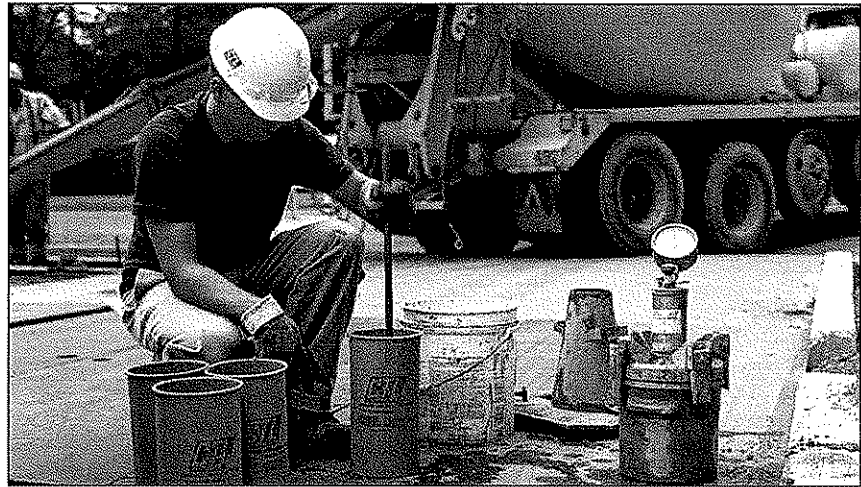
Construction Monitoring

A project's construction phase requires quality control inspections and reliable testing. Building owners, architects, engineers, and contractors choose CTL Engineering for field inspections, knowing 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:

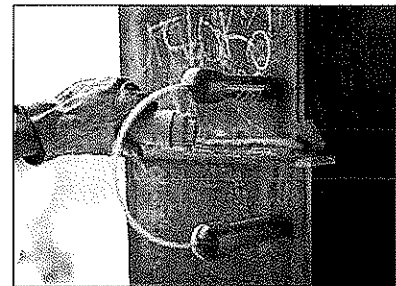
- ♦ **Earthwork, including Embankment & Foundations**
- ♦ **Reinforced Concrete**
- ♦ **Floor Flatness**
- ♦ **Roofing Systems**
- ♦ **Structural Steel**
- ♦ **Masonry**
- ♦ **Sprayed-on Fire Proofing Installation**
- ♦ **Bituminous & Portland Cement Concrete Paving**
- ♦ **Single & Multi-Story Building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

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



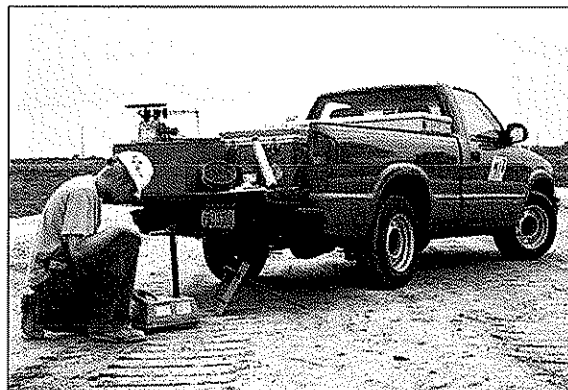
CTL Engineering examines existing structures to evaluate potential problems. Failed structures are analyzed to determine the cause and extent of damage. We evaluate structural integrity during initial construction and at regular intervals after completion. Our work includes steel reinforced concrete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

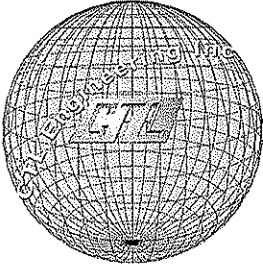
We perform audio/video surveys, sonic velocity testing, x-ray examinations, half-cell potential, and other destructive and nondestructive tests.



CTL Engineering's technicians maintain the following certifications and/or training:

- ♦ **ACI (American Concrete Institute) Level I**
- ♦ **NICET Certification Level I, II, III or IV**
- ♦ **Hazardous Materials Certification**
- ♦ **Confined Space Entry Training**
- ♦ **Radiation Safety Training**
- ♦ **WVDOT, ODOT, and NCDOT Certification**





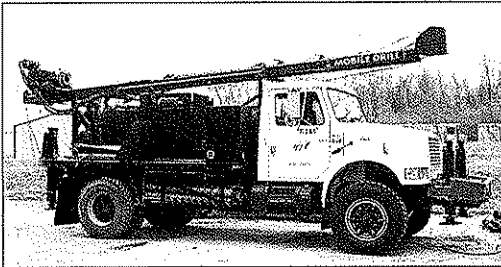
Firm's Equipment

Geotechnical Equipment

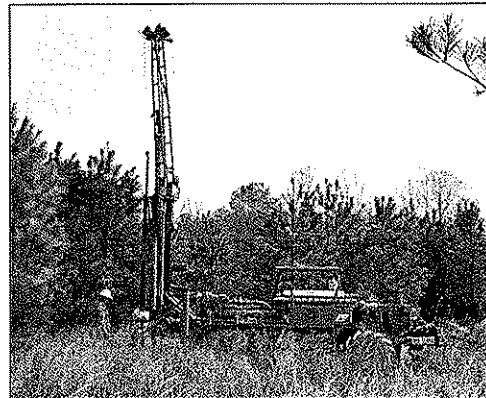
CTL Engineering Inc.'s subsurface exploration equipment is adaptable for use of barges or all terrain vehicles (ATV's). CTL can mobilize special equipment or a fleet of drilling rigs to a particular project requiring multiple units. CTL Engineering owns and operates ten (10) drill rigs with a capacity 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, triaxial and direct shear apparatus, 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 95/98 based operating systems

Microsoft Office 97/2000 is used for word processing, spreadsheets creation, data processing, and presentation creation.

Alternative software including Corel Suite is available, if necessary.



**WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
 AML CONSULTANT CONFIDENTIAL QUALIFICATION QUESTIONNAIRE "Attachment 3"**

PROJECT NAME Barker Portals & Strip Design Project, Barbour County, WV		DATE (DAY, MONTH, YEAR) 21, January 2009	FEIN 55-063-1834
1. FIRM NAME CTL Engineering of West Virginia, Inc.		3. FORMER FIRM NAME Columbus Testing Laboratories	
2. HOME OFFICE BUSINESS ADDRESS 2860 Fisher Road Columbus, OH 43204		6a. WV REGISTERED DEE (Disadvantaged Business Enterprise) YES NO	
4. HOME OFFICE TELEPHONE (614) 276-8123		5. ESTABLISHED (YEAR) CTL-1927 CTL-WV 1983	6. TYPE OWNERSHIP 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 - 12			

7. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM Patrick E. Gallagher, President CK Satyapriya, CEO		8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS Gerald Oreste, Secretary (614) 276-8123	
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9. PERSONNEL BY DISCIPLINE

4 ADMINISTRATIVE	- ECOLOGISTS	1 LANDSCAPE ARCHITECTS	- STRUCTURAL ENGINEERS
1 ARCHITECTS	- ECONOMISTS	- MECHANICAL ENGINEERS	3 SURVEYORS
1 BIOLOGIST	- ELECTRICAL ENGINEERS	2 MINING ENGINEERS	3 TRAFFIC ENGINEERS
4 CADD OPERATORS	3 ENVIRONMENTALISTS	- PHOTOGRAMMETRISTS	X OTHER,
- CHEMICAL ENGINEERS	- ESTIMATORS	- PLANNERS: URBAN/REGIONAL	3 Geotechnical Drillers
6 CIVIL ENGINEERS	3 GEOLOGISTS	2 SANITARY ENGINEERS	- Roofing
12 CONSTRUCTION INSPECTORS	- HISTORIANS	3 SOILS ENGINEERS	- Metallurgical
5 DESIGNERS	2 HYDROLOGISTS	2 SPECIFICATION WRITERS	12 Engineering Technicians
2 DRAFTSMEN			

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 2
 *RPES other than Civil and Mining must provide supporting documentation that qualifies them to supervise and perform this type of work.

47 TOTAL PERSONNEL

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 AM

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 _____
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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 Lands Remediation/Mine Reclamation Engineering?

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

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 WVDOR, 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 to keep to essentials)

NAME & TITLE (Last, First, Middle Int.) Gallagher, Patrick E. President, Project Manager	YEARS OF AML DESIGN EXPERIENCE: 32	YEARS OF AML RELATED DESIGN EXPERIENCE: 32	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 25
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Brief Explanation of Responsibilities
 President of CTL Engineering of WV, Inc.; responsible for the overall administration of the Morgantown, WV office along with the management of the individual engineering projects. His administration and management responsibilities include marketing, proposal preparation, client contact, supervision of design personnel, scheduling, budget control, and report preparation. Projects successfully completed by Mr. Gallagher include: Geotechnical Investigations, Foundation Design Investigations, Dam Stability Analyses, Mine Subsidence Evaluations, Mineral Reserve Studies, Landslide Investigations, Mine Reclamation Designs, Failure Investigations, and Mining Permits.

EDUCATION (Degree, Year, Specialization)
 B.S., 1975, Civil Engineering
 B.S., 1975, Equivalent, Geology

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

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.) Satyapriya, C.K. Principal	YEARS OF AML DESIGN EXPERIENCE: 25	YEARS OF AML RELATED DESIGN EXPERIENCE: 25	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
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Brief Explanation of Responsibilities

Chief Executive Officer for CTL Engineering, Inc. Project Manager for several subsurface evaluation projects in excess of \$1 million. Conducted several investigations with respect to slope stability and developed a computer program to model transient groundwater levels along slopes. Conducted subsurface investigations and provided site evaluations (inclusive of environmental impact statements) on several major projects; i.e., UPS and Nationwide. Experienced in deep foundations, piling, nondestructive testing, structural evaluations and mining engineering.

EDUCATION (Degree, Year, Specialization)
 M.S., 1974, Marine Geomechanics
 M.E., 1971, Soil Mechanics and Foundation Engineering
 B.E., 1969, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS
 Fellow of the American Society of Civil Engineers
 REGISTRATION (Type, Year, State)
 Registered Professional Engineer: 1976 - Ohio; 1980 - Kentucky; 1980 - Pennsylvania; 1980 - Virginia; 1981 - Maryland; 1981 - District of Columbia

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

NAME & TITLE (Last, First, Middle Int.) Foreman, Gregory, PE Project Engineer, Project Manager	YEARS OF AML DESIGN EXPERIENCE: 1	YEARS OF AML RELATED DESIGN EXPERIENCE: 3	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 16
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Brief Explanation of Responsibilities

Mr. Foreman as a PE is responsible for waterline design for CTL Engineering of WV, Inc. He is responsible for project management, coordination and supervision of various design, drafting, surveying and drilling projects; to include scheduling, estimating, client contacts and preparation of contract drawings and specifications. His area of expertise involves Potable water systems, sanitary sewer systems and storm water systems.

EDUCATION (Degree, Year, Specialization)
 B.S., 1989 Civil Engineering
 A.S., 1989 Mechanical Engineering
 A.S., 1989 Drafting & Design

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

REGISTRATION (Type, Year, State)
 Registered Professional Engineer, 1999, 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.) Gowarty Jr., James P. Manager Construction Services	YEARS OF AML DESIGN EXPERIENCE: 10	YEARS OF AML RELATED DESIGN EXPERIENCE: 10	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 16
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Brief Explanation of Responsibilities

Mr. Gowarty is Construction Services Manager at CTL of WV. He is responsible for supervising field and laboratory technicians. Also he is responsible for report writing for field and laboratory testing, project management, estimating, and client contact.

EDUCATION (Degree, Year, Specialization)

B.S., 1990 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.)
Hovatter Jr, Richard G
Project Manager/Project Engineer

YEARS OF AML DESIGN EXPERIENCE: 4
 YEARS OF AML RELATED DESIGN EXPERIENCE: 4

YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0

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)
 Certified Engineering Intern - 2002
 ROSGEN Level 1&2 Certified - 2007
 HEC-RAS Certification - 2005

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.)
Darrah, Timothy A.
Civil Site Dept. Mgr., Project Manager

YEARS OF AML DESIGN EXPERIENCE: 11
 YEARS OF AML RELATED DESIGN EXPERIENCE: 13

YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 11

Brief Explanation of Responsibilities

Mr. Darrah is presently responsible for scheduling, invoicing and client contacts for all surveying projects including topographic, property and construction layout. Mr. Darrah also serves as Project Engineer on various types of civil engineering projects including commercial and residential development and reclamation design projects. Office work includes drafting, writing of property descriptions, hydrology calculations, quantity calculations, and various other forms of surveying and engineering related duties. Mr. Darrah is also proficient computer software including, AutoCad, Civilsoft and various other forms of 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 AML DESIGN EXPERIENCE: YEARS OF AML RELATED DESIGN EXPERIENCE: YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 10

Gring, Todd
Survey Party Chief

4

Brief Explanation of Responsibilities

Mr. Gring is a Survey Party Chief, performing surveying and civil site design for both commercial and residential developments. His duties include ALTA surveys, topographic surveys, boundary surveys, mining surveys, route surveys, flood plain surveys and control surveying. He has extensive experience in drafting and design, legal descriptions, quantity calculations, scheduling, invoicing, word processing, plotting, data reduction, survey software, plat calculations, coordinate geometry, site design, sub-divisions and permitting.

EDUCATION (Degree, Year, Specialization)

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 AML DESIGN EXPERIENCE: YEARS OF AML RELATED DESIGN EXPERIENCE: YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 3

Stanley, Joseph F.
GPS Surveyor / CAD Designer

3

Brief Explanation of Responsibilities

Mr. Stanley is a Staff Engineer/CAD Designer / GPS Surveyor in the Morgantown, WV office. His responsibilities include all GPS Surveys, planning and design of civil site design projects involving land planning and development aspects. He is familiar with various engineering software programs including AutoCad 14 and AutoCad Architectural Desktop 2007 which provide support for the planning and design projects.

EDUCATION (Degree, Year, Specialization)

A.S., 2000 Drafting & Design

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

REGISTRATION (Type, Year, State)

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
Civilssoft
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
Thomas (Euclid Avenue), Phase II, AML Subsidence Stabilization, Tucker County, WV	WVDEP 105 S. Railroad Street Phillippi, WV 26416	Mine Stabilization design, Geotechnical Drilling and Surveying services, Hydrological Study & Risk Assessment (Phase 3)	\$1,308,390	Design 100% (Under Construction)
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%
Deckers Creek Watershed Study, Preston & Monongalia County, WV	Friends of Deckers Creek P.O.Box 877 Dellslow, WV 26531	ESA Phase 1 evaluation of potential AMD Remediation sites prior to design	\$700,000	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 50%

New University High School Morgantown, WV	Monongalia Board of Education 13 South High Street Morgantown, WV 26505	Subsurface Investigation & Grouting, Design, Construction Observation	\$12,000,000	Grout 100% 29,800 ft drilling 21,000 cy grout
Llewelyn AMD Impoundment Stability Analysis	Consol Energy 1800 Washington Road Pittsburgh, PA 15241	Impoundment Analysis To review & recommend on stability	\$100,000	50%
TOTAL NUMBER OF PROJECTS: 7				
TOTAL ESTIMATED CONSTRUCTION COSTS: \$17,000,000				

16. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS SERVING AS A S

-CONSULTANT TO OTHERS

PROJECT NAME, TYPE AND LOCATION	NATURE OF FIRMS RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONSTRUCTION COST	
				ENTIRE PROJECT	YOUR FIRMS RESPONSIBILITY
Harrison Power Station Flyash, Disposal Area, Construction Monitoring, Shinnston, WV	Surveying, Construction and 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
Open-Contract, Professional Engineering Services, various locations throughout WVU campus	Subsurface investigations, geotechnical drilling, surveying & civil site design, construction observation & testing	West Virginia University Planning, Design & Construction P.O. Box 6572 Morgantown, WV 26506	On-going	Open	
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
Wyoming AML Subsidence	Test Project using Dynamic Compaction to reduce cost and speed remediation process	Wyoming DEQ AML Division 122 West 25th St Cheyenne, WY	Dec 2007	\$250,000	\$50,000

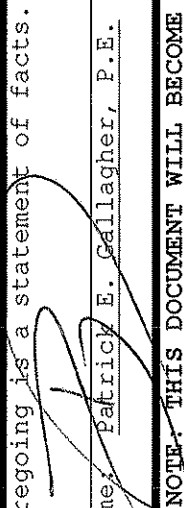
17. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM WAS THE DESIGNATED ENGINEER OF RECORD					
PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)	
Mon-View Development 400 acre Commercial development, Granville, WV	Mon View LLC c/o 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	
Suncrest Executive Office Civil Site Design Morgantown	Glenmark Limited Holding, L.L.C 1445 Stewartstown Rd Morgantown, WV 26505	\$16,000,000	2004	Yes	

18. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS BEEN A SUB-CONSULTANT TO OTHER FIRMS (INDICATE FIRM'S NAME 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
Various Contract Drilling	WVDOH 1900 Kanawha Boulevard Charleston, WV 25305	\$50,000.00	1997-2002	Yes	National Engineering
Monongah Bridge, Surveying and Construction Observation, Marion Co, WV	WVDOH 1900 Kanawha Boulevard Charleston, WV 25305	\$10,000.00	2002-2003	No	MEC Construction
4 covered bridges Simpson, Fletcher, Walkersville, Hokes Mill; Structural Supports, Surveying and Construction Observation; Harrison County, Lewis County, Greenbrier County	WVDOH 1900 Kanawha Boulevard Charleston, WV 25305	\$30,000.00	2002-2003	No	Allegheny Restoration

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

Title: President

Date: January 21, 2008

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

CONSOLIDATION OF WEST VIRGINIA, INC.

Patrick Gallagher, P.E.,
CPQS, WV PS
 President

Trisha Miner
Judy Snyder
 Administrative Assistants

Royden Loucks
 Director
 Business Development

Construction Services & Materials Laboratory

James Gowarty, Jr.
 Department Manager

Charles Huff
 Department Supervisor

Robert Adams
 Lab Manager

Field Technicians

Geotechnical Engineering/Drilling Services

Carl Selfridge
 Department Manager

Jeff Huffman, P.E.
 Project Manager

Gabe DeWitt
 Project Engineer

Ruben Mick
 Project Engineer

Drillers / Driller Helpers

Mining Engineering Services

Tim Darrah
 Department Manager

Richard Hovatter
 Project Engineer

Bucky Nicholson
Justin Kile
Danny Wolfe
 Staff Engineer /
 CAD Designers

Surveying/Civil Site Design Services

Tim Darrah
 Department Manager

Greg Foreman, P.E.
 Project Engineer

Todd Gring
Asa Akers
 Survey Party Chiefs

Joe Stanley
 GPS Surveyor

Nathan Huggins
Steve Hegedis
 Staff Engineers

Environmental Engineering Services

John Kock
 Department Manager

Jennifer Selfridge
Derrick Springston
 Environ. / GIS

Natural Stream Engineering

Richard Hovatter
 ROSGEN Level 1 & 2
Tim Darrah
 ROSGEN Level 1



Expertise

Mr. Gallagher serves as President of CTL Engineering of West Virginia, Inc. 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.

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 the deep mine permit program and 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., Equivalent, Geology
Virginia Polytechnic Institute and State University, Blacksburg, Virginia, 1975

Professional Registration / Certifications

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

Certified Professional Geological Scientist, # 6575

Professional Surveyor, WV

26 Years Experience with CTL Engineering, Inc.

32 Years of Direct Mine Reclamation Design Experience

Experience

A partial listing of Mr. Gallagher's relevant project experience includes:

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 ongoing 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.

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

Publications

“Mine Subsidence Stabilization In Steeply Dipping Seams In The Canadian Rockies. A Project Overview” Presented by Patrick E. Gallagher at the 19th Annual Conference of the Association of Abandoned Mine Land Programs Canaan Valley, WV August 17-20 1997

“Dynamic Compaction of Surface Mine Spoils to Limit Settlements Within Commercial Developments”, Presented Patrick E. Gallagher and C. K Satyapriya, Constructing and Controlling Compaction of Earth Fills, ASTM Seattle, Washington July 1-3 1999



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

17 Years Experience with CTL Engineering, Inc.

Experience

A partial listing of Mr. Darrah's relevant project experience includes:

Chaplin Hill Business Park, Morgantown, West Virginia

Project Manager responsible for conceptual layout and initial site design for the Monongalia County Economic Development Authority.

Lock & Dam Rehabilitation Project in Point Marion, Pennsylvania

Responsible for all Second Order, Class I Surveying for this \$45 million Corps of Engineers project.

West Virginia Department of Environmental Protection, Division of Abandoned Mined Lands and Reclamation

Performed the survey and design on abandoned mined lands on numerous projects for this state agency.

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.

Harrison Power Station for a \$900 Million SO₂ Removal Project in Shinnston, West Virginia

Survey crew chief responsible for construction stakeout and surveying.



Adelphia Cable Company, Various Locales

Project manager responsible for WVDOH and Railroad Crossings permits.

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.

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.

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.

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.

Aerial Photography, Various Locales

Project manager in charge of establishing GPS control for the aerial mapping of numerous projects throughout West Virginia.

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 Charleston office. 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 a Senior Geotechnical Engineer, Technical Director of Laboratory Services, and Technical Superintendent with other Engineering Consultants.

Education

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

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

Professional Registration / Certifications

Registered Professional Engineer

Pennsylvania, 1994, No. PE45671E; West Virginia, 2005, No. 016403;

Ohio, 2007, No. 72131; Kentucky, 2007, No. 25185; NCEES Registered, 2007.

1 Years Experience with CTL Engineering, Inc.

17 Years Experience with other Engineering Consultants.

Experience

A partial listing of Mr. Huffman's relevant geotechnical project management experience includes:

Expert Witness Testimony – Private Clients & Insurance Companies.

Provided expert testimony for binding and non-binding arbitration cases concerning building foundation and slope failures.

Geotechnical Design Recommendations – Ohio Department of Transportation.

Directed geotechnical exploration, developed design recommendations and prepared geotechnical reports for numerous bridge structures, roadways and soil and rock cut slopes.

Geotechnical Design Recommendations – West Virginia Department of Highways.

Directed geotechnical exploration, developed design recommendations and prepared geotechnical reports for numerous bridge structures.



JEFFREY T. HUFFMAN, P.E.

*Branch Manager &
Geotechnical Dept. Manager*

Portsmouth By-Pass – Portsmouth, Ohio.

Project involved design of 17-mile by-pass around the town of Portsmouth, Ohio that includes multiple interchanges. Performed slope stability and settlement analysis for embankment fills with maximum height of 220 feet. Prepared construction drawings and report with geotechnical recommendation.

Commercial Structures in Virginia, West Virginia, and Ohio.

Directed subsurface explorations, provided geotechnical recommendations and prepared reports for numerous commercial structures.

Pavement and Parking Area Designs and Evaluation in Ohio and West Virginia.

Directed subsurface exploration, performed visual evaluation, and developed designed pavement sections for numerous projects.

Christian E. Siegrist Dam - City of Lebanon, Pennsylvania.

Project involved construction of a new Roller-Compacted Concrete (RCC) Dam. Assisted in the concrete mix design for this new roller-compacted concrete dam. Directed strength testing of soil and rock. Functioned as Assistant Resident Engineer for foundation preparation and foundation grouting operations. Observed roller-compacted concrete placement and installation of rubberized upstream liner.

North Fork of the Hughes River Dam - Cairo, West Virginia.

Project involved the design of an RCC and earth dam. Supervised subsurface exploration including barge drilling. Developed soil borrow locations and evaluated material quality and quantity. Prepared preliminary construction drawings and specifications.

Irwin Creek WWTP Additions and Alterations - Mecklenburg, North Carolina.

Project involved the addition of pump stations, aeration basins, detention tanks, parking areas and roadways. Supervised subsurface exploration, provided design recommendations and prepared geotechnical report.

Hershey Medical Center Embankment Design and Sinkhole Remediation - Hershey, PA.

Project involved the design of a storm water detention pond in Karst topography. Supervised subsurface exploration, assisted in the embankment design and drawing and specification preparation. Supervised sinkhole remediation during construction.

Foundation Design, Interstate 81 and Interstate 380 Interchange - Lackawanna County, PA.

Project involved the design of an 18-structure interchange overlying deep mines. Assisted with subsurface investigation and backfilling of abandoned coalmines. Provided design recommendations for bridges and approach abutments. Assisted in preparation of geotechnical reports.

Geotechnical Design Recommendations – Pennsylvania Department of Transportation.

Assisted in the geotechnical analysis, development of design recommendations and the preparation of geotechnical reports for numerous bridge structures.



JEFFREY T. HUFFMAN, P.E.

*Branch Manager &
Geotechnical Dept. Manager*

Professional Affiliations

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

Additional Experience

**Research & Development on the Polypropylene Fiber Reinforcement of Soils, Synthetic Industries -
Chattanooga, Tennessee.**

Directed research and development activities including development of design methodologies, installation techniques, field and laboratory testing methodologies, and manufacturing methods.



Education

B.S/1989/Civil Engineering/Fairmont State College
A.S/1989/Mechanical Engineering/Fairmont State College
A.S/1989/Drafting and Design/Fairmont State College

Registration

Professional Engineer: West Virginia, 1999, #14165

Affiliations

American Society of Highway Engineers, North Central Division

Capabilities

Currently have over sixteen years experience in general civil engineering and utility design. My career has encompassed many aspects of civil engineering including site development, sanitary sewer design, water distribution design, utility planning, and computer aided drafting.

Experience

City of Fairmont, Sanitary Sewer Improvements, Fairmont, West Virginia; As project engineer, my involvement included the field investigation and evaluation of the existing sewer system. Responsibilities included the design and specifications for the sewer replacement. Project involved the horizontal and vertical alignment of the gravity sewer system and force mains. Additional assignments and investigations included the submittals of permits and applications for construction authorization. The evaluation involved the review of the discovered problems and the remedy of the system.

Town of Fairview, Sidewalk Improvement, Fairview, West Virginia; As project engineer, my involvement included design and preparation of construction plans and specifications for the removal and replacement of 1,000 square yards of concrete sidewalk including the installation of handicap access ramps along Main Street.

South Hills Farms Subdivision, Bridgeport, West Virginia; As project engineer, my involvement included the expansion of an existing subdivision. Responsibilities included the design and layout alternatives of residential building lots. In addition to the expansion design, reviewed and determined sanitary sewer service to accommodate additional residential building lots located within the existing development.

City of Shinnston Waste Water Improvement Project Shinnston, West Virginia; As project engineer, my involvement included the field investigation and evaluation of the existing sewer system. The field investigations involved the flow monitoring of the system and researching the storm water infiltration of the system. The evaluation involved the review of the discovered problems and the remedy of the system.



Ray Dental Office Fairmont, West Virginia; As project engineer, my involvement included the design and site development of a new dental office complex. Responsibilities included the development of the grading plan, parking facilities and storm water management, including drainage facilities.

Dominion Transmission, Oakford Compressor Station, Sanitary Sewer Extension Project Delmont, Pennsylvania; As project engineer, my involvement included the design and layout for the extension of the existing sanitary sewer system to the Dominion Transmission, Oakford Compressor Station. Responsibilities included the design and specifications for the sewer extension. Project involved the horizontal and vertical alignment of the gravity sewer system and force main serving the complex. Additional assignments and investigations included the submittals of Pennsylvania permits and applications for construction permits.

Morgantown House Demo Morgantown, West Virginia; As project engineer, my involvement included the development of specifications and land reclamation for the removal of structures. Other responsibilities included developing location maps identifying the desired structure demolition.

Grant Town Water Tank Grant Town, West Virginia; As project engineer, my involvement included the development of specifications consisting of the refinishing of an existing water storage facility. Requirements included the retrieval of paint specimens for the determination of lead toxicity and the development of contract documents.

City of Shinnston. Water System Improvement Project Shinnston, West Virginia; As project engineer, my involvement included the design and requirements of the refurbishing the existing potable water system. Responsibilities included preparation of plans and specifications for the water line installation and water storage facilities improvements.

The following experiences were acquired while employed by Hornor Brothers Engineers, Clarksburg, WV:

Clarksburg Water Board, Clarksburg, West Virginia. Assisted the project manager in the creation of plans for the replacement of waterlines along Main Street in downtown Clarksburg. Served as project engineer compiling field notes, developing construction plans, and assembling construction details.

Clarksburg Waterline Extension for F.B.I. Facility, Bridgeport, West Virginia. Assisted the project manager in the creation of plans to supply potable water to the facility. Served as a project engineer compiling field notes, developing maps and plans for the construction of the distribution system, developing plans for the erection of water storage facilities and assembling construction details. During the construction phase, performed engineering inspection to ensure the quality of the final product.



Century Volga Public Service District, Philippi, West Virginia. Assisted the project manager in the creation of plans to construct three separate waterline extension projects to supply potable water to outlying areas. Project engineer responsible for compiling field notes, determining waterline sizes for the development of maps and plans for the construction of the distribution system, calculating storage tank capacity, developing plans for the erection of water storage facilities, and conducting research for right-of-way acquisitions. During the construction phase, assisted the inspectors as well as performing periodic inspections.

Wetzel County Public Service District, Wetzel County, West Virginia. Assisted the project manager to create three separate waterline extension projects to supply potable water to outlying areas. Project engineer responsible for compiling field notes, determining waterline sizes for the development of construction plans, calculating and investigating fire protection feasibility, calculating storage tank capacity, developing plans for the site work and erection of water storage facilities, and conducted research for right-of-way acquisitions. During the construction phase of the projects, assisted the inspectors and performed periodic inspection.

Gilmer County Public Service District, Gilmer County, West Virginia. Assisted the project manager in the development of construction plans for a waterline extension. Project engineer responsible for compiling field notes, developing construction plans for waterline placement, and developing site plans for the erection of a water storage facility.

Adrian Public Service District, Adrian, West Virginia. Assisted the project manager in the creation of four separate water line extension projects to supply potable water to outlying areas. Project engineer responsible for compiling field notes, determining waterline sizes for the development of construction plans, calculating and investigating fire protection feasibility, calculating storage tank capacity, developing plans for the site work and erection of water storage facilities, calculating booster pump station sizes, developing plans for the site work and placement of the booster pump stations, and conducting research for right-of-way acquisitions. During the construction phase, assisted the inspectors and performed periodic inspection.

Huffman Industrial Park, Bridgeport, West Virginia. Assisted the project manager in the creation of utility support plans for an industrial park. Project engineer responsible for development of potable water facilities and sanitary sewer development. The water facility design consisted of determining classification and size to support fire protection and strategic placement of fire hydrants. The sanitary sewer infrastructure consisted of gravity sewer and force main in order to connect to the existing Bridgeport sanitary sewer system. The sanitary sewer design consisted of determining grade and flow direction, manhole placement, corresponding elevations for the gravity sewer, calculating lift station size and developed plans for the site work and placement of the lift station, determining location for the placement of the force main, which was connected to the existing sewer system.

Timber Valley, Fairmont, West Virginia. Project engineer responsible for developing the layout of lot line, streets, sewer and water lines.

GREGORY FOREMAN

Water Main Project Manager

Crest View Acers, Taylor County, West Virginia. Assisted the project manager in the plans for a residential housing development. Project engineer responsible for plans and location for utility locations and infrastructure development.

Auburn Woods, Bridgeport, West Virginia. Assisted the project manager in the plans for a residential housing development performing duties such as the plans and location for utility locations and infrastructure development.
landfills in Pennsylvania.



Expertise

Mr. Hovatter is responsible for topography, Construction layout, Reclamation Design, 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 Surv CADD, 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

Certified Engineer Intern
ROSGEN – Level 1 & Level 2 Natural Stream Design
HEC-RAS Certification

4 Years with CTL Engineering Inc.

Experience

ODNR – Emergency Program

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

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.

EA Morgantown, LLC, Morgantown, West Virginia

Utilized HEC-RAS to calculate the flood plain elevation of the project site.

Pineview Place, Morgantown, West Virginia

Performed the watershed delineation and storm water calculations. Also prepared the design of an underground storm water storage unit.

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.



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.

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.

Expertise

As a Project Engineer, Mr. Mick's responsibilities include structural evaluations, new construction inspections, mine subsidence investigations, technical reports and letter writing.

Education

B.S., Engineering Technology
Fairmont State College, Fairmont, West Virginia, 1975

Professional Registrations / Certifications

Fundamentals of Supervision, Management Development Institute, Consolidation Coal Company, 1994

Impoundment Inspector, Consolidation Coal Company, 1993

Ergonomics Committee, Consolidation Coal Company, 1995

Experience

27 Years of Experience, 5 years with CTL Engineering, Inc.

A partial listing of Mr. Mick's relevant project experience includes:

WVDOH, Williamstown Welcome Center, Parkersburg, WV

Project Inspector responsible for construction observation services for the construction of a new Williamstown Welcome Center.

Cheat Lake Waste Water Treatment Plant Expansion, Morgantown, WV

Project Inspector responsible for quality assurance for inspections on concrete, reinforcement and contractor daily observation. Expansion included increasing the capacity from 250,000 gallons/day to 750,000 gallons/day.

Chaplin Hill Sewer and Water System Expansion, Morgantown, WV

Project Inspector responsible for quality assurance for corrosion protection, utility trenching, line expansion and construction methods.

Mining

Submitted numerous proposals for turn-key installation of various material handling projects to various coal and aggregate industries including Eastern Associated Coal Corporation, Consol, Inc., Cyprus Resources Corporation, Massey Coal Company, Anker Energy, Kentucky Stone Company and Vulcan Materials Company which included projects ranging from \$10 K up to a \$12 M, 1050 TPH preparation plant facility for Coastal Coal Company of Kingwood, WV.



RUBEN R. MICK, JR.

Project Engineer

Performed portal/bathhouse, warehouse and office modifications for the Oakdale Portal of Robinson Run Mine, Miracle Run Portal of Loveridge Mine, Osage main office and installation of the \$1.2 M Koontown Portal/Bathhouse/Warehouse facility for Blacksville No. 2 Mine of Consolidation Coal Company accommodating 400 people on a 3 shift basis.

Performed rehabilitations and new installations of overhead catenary systems for surface main haulage and supply tracks at the Robinson run, Arkright and Humphrey Supply Yards.

Performed design layout and installation of numerous oil/fuel surface containment structures to replace existing in-ground tank installations to comply with environmental regulations.

Supervision of conventional and bleeder shaft sinking including installation of associated vane axial and centrifical ventilation fans and motor houses for various mines throughout the Northern WV region.

Structural and concrete rehabilitation of existing preparation plant facilities and their associated conveyor systems.

Performed general arrangement design layout of miscellaneous projects including new buildings, additions, renovations, parking lots, fencing systems, water treatment facilities and track haulage overhead catenary systems.

Fabrication and painting inspection of structure and platework.

Performed rehabilitation and new installation of mooring cells along the Monongahela River for the Arkright and Humphrey Barge Loading Facilities.



EDUCATION:

Rensselaer Polytechnic Institute; Troy, NY

- **Graduate Studies, Civil Engineering** (Geotechnical), 1996-1999
- **B.S., Civil Engineering** (Geotechnical & Structural), 1996

Adirondack Community College; Queensbury, NY

- **A.S., Engineering Science**, 1994
- **A.A.S., Mechanical Technology - Design & Drafting**, 1991

REGISTRATIONS:

Engineer Intern (EI): New York, 1996

CERTIFICATIONS & TRAINING:

Pennsylvania Dept of Transportation Level II Drilling Inspector, 1999

EXPERIENCE

CTL Engineering of WV, Inc., Morgantown, WV (2007)

Responsibilities:

Mr. Selfridge has been employed by CTL Engineering for nearly one (1) year. Annually manages 100+ various geotechnical projects; including transportation, commercial development, public schools, and 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.

Gannett Fleming, Inc., Morgantown, WV (2000-2006)
Valley Forge, PA (1999-2000)

Projects:

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.



CARL G. SELFRIDGE

Geotechnical Engineer

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. Evaluated and modified the existing stone and mortar abutments and wingwalls.

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. Special issues:

- Performed onsite inspection and monitoring and control of Dynamic Compaction Test Program to compare the reaction of different valley fill types. Prepared the Geotechnical Engineers Recommendation Report.
- Mine spoil fire site analysis and recommendations.

S.R. 0040, Section 06M, Youghioghney Bridge Replacement over the Youghioghney 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 Youghioghney 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.

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. Reviewed and prepared quantities for the drainage structures and E&S control.



CARL G. SELFRIDGE

Geotechnical Engineer

Ambridge-Aliquippa Bridge Replacement, Beaver County, PA, Pennsylvania Department of Transportation, District 11-0.

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



CARL G. SELFRIDGE

Geotechnical Engineer

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.

Rensselaer Polytechnic Institute, Troy, NY (1997-1998)

Prepared and demonstrated common geotechnical tests. Graded assignments, assisted students, and managed the grades

Smith Dairy Farm, Gansevoort, NY (1986-1997)

Maintained and operated farm machinery and equipment. Assisted with the daily operations of the dairy farm

Finch, Pruyn and Co., Inc., Glens Falls, NY (1989-1996)

Safety-inspection during paper machine rebuilds and maintenance work, bleach plant lab technician and performed various other technical and non-technical duties in various department in the mill.

PUBLICATIONS

Evaluation of Frost Penetration Using a Two Parameter Measurement System., J.D. Quiroz, T.F. Zimmie, C.G. Selfridge. Presented at the International Symposium on High Altitude and Sensitive Ecological Environmental Geotechnology, China. August 1999.

King's Covered Bridge Restoration., S.H. Petro, E.L. Kemp, C.G. Selfridge, C.E. Stonebraker, Gannett Fleming, Inc., Morgantown, WV, and W. Collins, Simone Collins, Berwyn, PA., International Bridge Conference 2006 (IBC-06-65)

COMPUTER SOFTWARE:

HEC-1, HEC-RAS, Haestad's FlowMaster and CulvertMaster, MathCad, MS Word, Excel, AutoCAD, Microstation, Slope/W, SEEP/W, GRLWEAP, L-PILE, COM624P, Logdraft, STABLE, PA-STABLE, Maple, FORTRAN, C

PROFESSIONAL AFFILIATIONS

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



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 Audits and radiation safety officer and branch safety officer. In addition, Mr. Gowarty is the Construction Materials Testing Supervisor, providing concrete, compaction, and aggregate testing and has over six years of experience with Nuclear Gauge Operation.

Education

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

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

Professional Registrations/ Certifications

West Virginia Department of Highways Certified Compaction Technician

West Virginia Department of Highways Certified Bituminous Concrete Technician

State of Maryland Certified Water Sampler

WVDOT Aggregate Sampler

NICET Level III Asphalt & Concrete

NICET Level II Soils

Certified Dipfloor Profiler Operator

16 Years of Experience with CTL Engineering, Inc.

Experience

A partial listing of Mr. Gowarty's relevant project experience includes:

***Warrior Run Company, Generation Plant, Geotechnical Studies
Cumberland, Maryland***

CTL Engineering performed Construction Observation and Structural Steel Inspection Services for this project.

WVU Student Recreation Facility; Project Manager/Engineer overseeing performed for the construction of the \$34 M dollar recreational facility located on WVU campus.



Beckley Federal Courthouse, Beckley, WV

Project Manager responsible for performing and overseeing all construction materials and testing inspection services to include compaction, concrete, structural steel, pre-pour inspections and fireproofing during the construction of this project.

Fayette Energy Facility, Masontown, PA

Project Manager responsible for performing and 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.

Harrison Power Station, Haywood, West Virginia

CTL Engineering performed numerous types of testing for this facility including: Concrete and compaction testing and compaction testing for the CO2 liner system at this facility. This project boasted \$100 million dollars in construction costs and CTL Engineering was responsible for over \$80,000 worth of testing and various consulting engineering services.

Allegheny Power Systems (open-ended contract for transmission distribution and power station projects)

Project Manager responsible for construction testing and observation, material testing, structural steel and surveying for various projects under this contract.

American Electric Power, John Amos Power Plant, Nitro, West Virginia

Project inspector providing inspection and testing for coal silo relining project at the power station. Mr. Gowarty also witnessed sandblasting, gunnite applications and workmanship for the project.

Grant Town Power Plant, Marion County, West Virginia

Senior Civil Engineer for the construction observation and materials testing and inspection for this facility.

Glenmark Centre, Morgantown, West Virginia

Project Manager responsible for construction testing and inspection services for this 10 + acre site. Other services provided were storm water management, "ALTA" surveys, construction stake-out and observation and sanitary treatment facilities.

Newpointe Center, Clarksburg, West Virginia

Project Manager providing construction testing and inspection services for this project. CTL also provided surveying and civil site design, geotechnical engineering, dynamic compaction, and observation services for the installation of sanitary, water and storm sewer pipe for this project.

Cheat Lake Waste Water Treatment Plant Expansion, Morgantown, West Virginia

Project Manager responsible for providing oversight of the construction inspection services for this project. The project included increasing the capacity from 250,000 gallons/day to 750,000 gallons/day.



JAMES P. GOWARTY, JR.

Construction Services Manager

Chaplin Hill Sewer and Water System Expansion, Morgantown, West Virginia

Project Manager responsible for overseeing construction testing and inspection services for the line expansion and construction methods for this project.

WVU Wise Library; Project Manager/Engineer overseeing construction testing and inspection services for the construction of a new six (6) story library, which included the design of an extensive tie-back/soldier pile wall system.

WVU Life Sciences Building; Project Manager/Engineer providing overseeing construction testing and inspection services being performed of the Life Sciences Building.

Suncrest Junior High School Construction Project, Morgantown, West Virginia

Project engineer responsible for daily excavation work.

National Airport, Washington D.C.

Project engineer dipstick floor profile testing for the layout of floor test sections and testing of random traffic floors.

CDC, Morgantown, West Virginia

Project engineer dipstick floor profile testing for the layout of floor test sections and testing of random traffic floors.

Kroger, St. Clairsville, Ohio

Project engineer dipstick floor profile testing for the layout of floor test sections and testing of random traffic floors.

The Greene County State Correctional Institution, Waynesburg, Pennsylvania

Project engineer for dipstick floor profile testing for the layout of floor test sections and testing of random traffic floors.

Federal Highway Administration, Raleigh, North Carolina

Laboratory technician who performed on-site testing of bituminous materials and aggregates for extraction, specific gravity, rice theoretical, stability and flow, gradation, aggregate angularity, material sampling, marshall and gyratory specimens at project locations.

Federal Highway Administration, Gainesville, Florida

Laboratory technician who performed on-site testing of bituminous materials and aggregates for extraction, specific gravity, rice theoretical, stability and flow, gradation, aggregate angularity, material sampling, marshall and gyratory specimens at project locations.



Expertise

Mr. John Nock manages the Environmental Department for CTL WV and has 19 years of environmental experience, which includes performing remediation planning and oversight, environmental audits, solid waste management, tank closures and removal, storm water management, permitting, site investigations, management of personnel and maintaining operational budgets. Mr. Nock is a WV certified asbestos inspector and a WV certified UST remover.

Education

B.S., Environmental Sciences
Frostburg State University, Frostburg, Maryland, 1988

Professional Registrations / Certifications

Health and Safety Officers Training
Certified WV Tank remover
OSHA 40-Hour Training, Hazardous Waste Operations
Troxler training
WV Asbestos Inspector
Hazardous Materials Incident Response Operations

6 Year Service with CTL Engineering, Inc.

Experience

A partial listing of Mr. Nock's relevant project experience includes:

Remediation of a Groundwater Treatment Facility, Allegheny Ballistics Laboratory, Mineral County, West Virginia

Project manager for the capture and treatment of 68,000 gallons per day of PCB-contaminated groundwater before its migration into the North Branch of the Potomac River. On call 24 hours for this new, \$5million facility. Constructed a recycling well field designed to last 30 years with 42 pumping wells. Water was treated through a series of holding tanks, air strippers, carbon vessels and UV oxidation lamps, then circulated to a boiler to heat the facility.

Remediation of 12-acre National Forge Steel Corporation Site in Warren, Pennsylvania

Project manager for the construction of a 200-foot diameter slurry wall to encapsulate a lagoon and surrounding area severely contaminated with industrial cutting oil.

WVDEP Landfill Closure Assistance Program, Various Locales West Virginia

Program manager for the decommissioning of a 17-acre landfill for the regrading over 96,800 SY of earth and trash for the \$3 million project. Utilized on-site materials for all components of



erosion controls, leachate collection, road construction, diversion berms, and pond construction. Directed the construction of a 233 thousand-gallon leachate collection tank.

12 Cell Expansion for Waste Management, BFI & USA Waste Projects, Pennsylvania

CQA manager for this project involving managing and documenting all phases of construction, liner placement, geotextile deployment, sampling, and seam testing.

Assistant Plant Operator for the Upper Potomac River Commission, an industrial/municipal waste water treatment plant for Westvaco Paper Corporation. Involved in all areas of operating this facility treating thousands of gallons of water and by-products daily. Supervised the reclamation of several ALM projects where solid by-products were used to reclaim blighted areas.

Phase I Environmental Site Assessments – Project Manager for assessments of vacant land with previous structural development, agricultural properties, commercial, industrial, and multi-residential sites. Conducted site inspections, agency record review, database reviews, aerial photograph reviews, historical research and prepared technical reports. Also conducted limited asbestos surveys, radon screening, lead based paint testing, lead in drinking water, and indoor air quality surveys when required.

Phase II Environmental Site Assessment - Project Manager for Phase II Environmental Site Assessments (ESAs) on properties with USTs, petroleum hydrocarbons, volatile organic compounds and other environmental concerns. Performed test borings, soil vapor surveys, exploratory excavations, groundwater monitoring, hand sampling, specification of chemical analysis and delineation of contaminated soils and groundwater. Prepared technical reports.

Asbestos Surveys - Performed comprehensive AHERA surveys on facilities for remodel and demolition and limited asbestos surveys as part of Phase I ESA protocol. Involvement included client contact, sampling, and report preparation.

LUST: Project Manager during removal of USTs, delineation of soil and groundwater contamination, design, and operation and maintenance of air sparge and vapor extraction system (VES) utilizing a catalytic oxidizer. Involvement included client contact, interaction with regulatory agencies, proposal writing, report preparation, soil and groundwater sampling, and air monitoring of the VES

LUST Projects – Project Manager for compliance inspections of underground storage tanks, site characterization investigations, agency reporting including site characterization reports, corrective action plans, and LUST closure.

Geotechnical Subsurface Investigation – Performed several drilling activities over abandoned mines that affected hillside stability for perimeter properties of South Hills Landfill (Waste Management). The boreholes were then filled with grout and sealed.

Operations Management – Performed all managerial duties for two waste management companies. Created and maintained budgets of \$3 million. Hired, supervised, and scheduled 16



JOHN E. NOCK

Environmental Services Manager

employees, evaluation performance regularly. Ensure compliance on all permit issues and remained violation-free during my tenure. Oversaw contract negotiations in excess of \$3million and ensure proper management. Designed a residual waste stream program that was duplicated at all Waste Systems International landfills in Pennsylvania.



Expertise

Ms. Jennifer Selfridge has 11 years of environmental experience, which includes performing remediation planning and oversight, groundwater and geochemical modeling, creating and maintaining GIS maps and databases, environmental audits, permitting, site investigations, management of personnel, environmental remediation system performance analysis, and environmental laboratory sample analysis.

Education

M.S., Engineering (Environmental)
West Virginia University, Morgantown, West Virginia, 2005

M.S., Geology
Rensselaer Polytechnic Institute, Troy, New York, 1996

B.S., Geology
Rensselaer Polytechnic Institute, Troy, New York, 1993

Professional Registrations / Certifications

OSHA 40-Hour Training, Hazardous Waste Operations

OSHA Hazardous Waste Supervisor

Advanced Municipal Separate Storm Water Sewer Systems (MS-4) Issues

Groundwater Modeling Using Visual Modflow

Regulatory Training in Underground Storage Tanks

Various ESRI GIS Technology courses for ArcGIS and ArcMap

Member American Society of Civil Engineers, Geological Society of America, Association for Women Geoscientists (Elected Southeastern Delegate) and Sigma Gamma Epsilon

1 Year Service with CTL Engineering, Inc.

Experience

A partial listing of Ms. Selfridge's relevant project experience includes:

MS-4 Phase II Storm Water Program, Granville and Westover, WV – Ms. Selfridge is currently the project engineer for two municipalities for implementation of the Phase II Storm Water permitting process. This permit will ensure storm water quality compliance to the National Program and administer storm water control of all development within each community.



Avalanche Hazard Potential Mapping, High Peaks Region, Adirondacks, New York – Project Manager for the determination of potential avalanche hazards for hiking trails and lean-to shelters in within the study area. Suitable camping areas were determined after combining potential avalanche areas and NYS Department of Environmental Conservation regulations. GIS data files and area maps were located and converted into one uniform projection and coordinate system. Factors affecting avalanche hazard were determined and weighted. Necessary data sets were digitized or created. Three-dimensional fly-through maps were produced. Resulting maps were analyzed for areas of high risk for avalanche.

Determining Suitable Blueberry Production Areas, Statewide, West Virginia – Project Geologist for the determination of suitable areas for blueberry production in West Virginia for market gardeners. Necessary data sets and maps were located and converted to uniform projections and coordinate systems. Data sets were created for specific blueberry production conditions. Requirements for blueberry production were determined and applied to each county in West Virginia. These areas were referenced with population centers which would provide the customer base for the market growers.

Source Water Assessment and Protection Program (SWAP), Logan, Mingo, Preston Counties, West Virginia – Staff Geologist for the resource characterization, delineation and mapping of the source water protection area, and the susceptibility analysis for surface and ground water.

Phase I Environmental Site Assessments – Project Engineer for assessments of vacant land with previous structural development, agricultural properties, commercial, and multi-residential sites. Conducted site inspections, agency record review, database reviews, aerial photograph reviews, historical research and prepared technical reports.

Phase III, V, and VI Environmental Site Assessments – Staff Engineer for Phase III, V, and VI Environmental Site Assessments (ESAs) on properties with chlorinated hydrocarbons, petroleum hydrocarbons, volatile organic compounds and other environmental concerns. Performed test borings, soil vapor surveys, geotechnical subsurface investigations, groundwater monitoring, hand sampling, specification of chemical analysis and delineation of contaminated soils and groundwater. Performed groundwater flow rate and direction modeling. Operation and maintenance of remedial systems. Monitored remedial system. Compliance testing. Prepared technical reports.

Permitting – Air Quality permitting for coal preparation and handling plants. Air Quality permitting for groundwater remediation systems on industrial sites. NPDES and NJPDES compliance reporting. Well permit application.

Geochemical Analysis and Interpretation – Staff Geologist responsible for soil, sludge, and water sampling and analysis using federal and state protocols. Geochemical modeling of analytical results to evaluate current conditions and predict future condition with application of remedial technology. Extracted and analyzed sediment and water samples for petroleum hydrocarbons, polychlorinated biphenyls (PCBs), heavy metals and pesticides. Wrote computer program to assist in interpretation of sediment core dating. Calculated concentration and toxicity of dioxins and dibenzofurans from sediment samples. Characterized, identified, aged dated and



fingerprinted petroleum products in environmental samples. Used contaminant fingerprinting to prove point source of dioxin and petroleum hydrocarbon releases.

Woodland Route 72 and Route 532 Dump Sites (NPL sites), New Jersey – Staff Engineer responsible for geologic reinterpretation of subsurface data which resulted in a redesign of remediation system which saved PRPs \$20 million in remediation costs. Responsible for drilling and cone-penetration boring layout, drilling inspection, and borehole logging. Performed data analysis and interpretation. Vertical and horizontal delineation of contaminant plumes. Groundwater observation and monitor well installation oversight. Soil and groundwater sampling. Aided in design and layout of air sparging – soil vapor extraction system to be augmented by biostimulation.

Publications

Bopp, Richard F., Jennifer A. Butler (Selfridge), Damon A. Chaky, Edward L. Shuster, Steve N. Chillrud, and Fred D. Estabrooks. “Geographical and Temporal Distribution of Particle-Associated Contaminants in Sediments of the Hudson River Basin.” Presented at SETAC Annual Meeting, Washington, DC, 1996.

McDonald, Louis M., Jeffrey G. Skousen, Jennifer A. Selfridge, Paul F. Ziemkiewicz, and Kathy A. Lenter. “Effects of Chemical and Sulfate on Floc Characteristics for Treating AMD.” Presented at the 23rd West Virginia Surface Mine Drainage Task Force Symposium, Morgantown, West Virginia, April 2002.

Selfridge, Jennifer A. and Louis M. McDonald. “Effect of iron coatings on limestone and surface area on dissolution rates.” GSA Abstracts with Programs Vol. 34, No. 6, September 2002. Presented at GSA Annual Meeting, Denver, Colorado, October, 2002.

Selfridge, Jennifer A. and Louis M. McDonald. “Armoring Processes in Passive Mine Drainage Systems.” Presented at ASA-CSSA-SSSA Annual Meeting, Indianapolis, Indiana, November, 2002.

Selfridge, Jennifer A., Louis M. McDonald, Jeffrey G. Skousen, and Paul F. Ziemkiewicz. “Effect of iron coatings on limestone surface area and dissolution rates.” Presented at the 24th West Virginia Surface Mine Drainage Task Force Symposium, Morgantown, West Virginia, April 2003.

Expertise

CADD Designer with responsibilities including drafting and design of reclamation plans, hydraulic & hydrologic design of drainage structures, slope stability analysis, technical specifications writing, balancing of earthwork quantities, concrete footings, geotechnical site plans, and survey stake outs and data collector downloading and uploading. Experience with AutoCAD 14, AutoCAD 2000, AutoCAD 2004 and Rendering, Land Development Desktop Technical Application Software.

Staff Engineer with responsibilities including hydraulic & hydrologic calculations, storm water system design, federal, state, and local permitting for the site design, and any other calculations involving the design.

Education

A.S., Drafting & Design Technology
Fairmont State College, Fairmont, West Virginia, 2000

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

Professional Registration/ Certifications

American Society of Civil Engineers

4 Years with CTL Engineering, Inc.

Experience

Wendy Restaurant, Morgantown, WV

Civil Site Designer responsible for site design and layout of the building, parking lot, underground stormwater storage system and landscaping. Staff Engineer responsible for the underground stormwater storage system design and all permitting that was required by state and local government.

ODNR Reclamation

Staff Engineer on ODNR Reclamation Project providing mapping and surveying controls for design project

Suncrest Executive Office Building, Morgantown, WV

Civil Site Designer responsible for site layout of the retaining walls, 5-story building, parking lot, underground stormwater storage system, and two-story parking garage and any redesign that needed to be done on the site.



EA Development, Morgantown, WV

Civil Site Designer responsible for assistant in site design of the 30+ acres development and the placement of the building, roadways, stormwater pond, stormwater piping. Staff Engineer responsible for the sediment and erosion permitting through the West Virginia Department of Environmental Protection and permitting through the US Corp of Engineer for wetland and stream delineation, along with complete stormwater piping and storage ponds design and flood plain analysis.

West Virginia University Hospital Various Parking Lots Improvement, Morgantown, WV

Civil Site Designer responsible for site design or assistants in the site design on various parking lots. Staff Engineer responsible for the sediment and erosion permitting and stormwater permitting through both the state and local government, stormwater design or redesign of various ponds or new underground storage systems.

Walgreen's, Morgantown, WV (First Walgreen's in the state of West Virginia)

Civil Site Designer responsible for site design and layout of the building, retaining wall, parking lot, the underground stormwater storage system, and creating the ALTA/ACSM Land Title Survey for the site. Staff Engineer responsible for all state and local permitting and design of the underground stormwater system.

Technical Skills

Engineering Graphics (AutoCAD Land Desktop 2004 & Board Work)

Technical Drafting (AutoCAD Land Desktop 2004 & Board Work)

Surveying Experience with data collectors

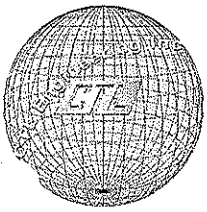
Technical Drawings

TR-55 and Hec-Rac

Survey 3.0

Microsoft Word, Excel, and Access





Professional Discipline Listing

Principals

- Patrick E. Gallagher, P.E., CPGS
- C.K. Satyapriya, M.S., P.E.

Project Managers

- Richard Hovatter
- James P. Gowarty, Jr.
- Ruben Mick

Civil Engineers

- James P. Gowarty, Jr.
- Timothy Darrah
- Gregory Foreman, P.E.
- Richard Hovatter

Environmentalists

- John Nock
- Jennifer Selfridge

Staff Engineers

- Millard Nicholson
- Nathan Huggins
- Joe Stanley

Geologists / Hydrologist

- Patrick E. Gallagher, P.E., CPGS
- Jennifer Selfridge

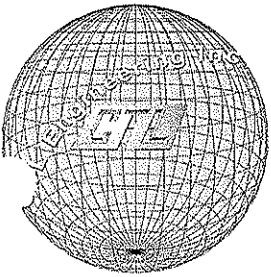
Geotechnical Engineers

- Patrick E. Gallagher, P.E., CPGS
- Carl Selfridge
- Gabe DeWitt

Laboratory Managers

- Steve Huff
- Robert Adams





Corporate Specialized Experience

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

Project Synopsis

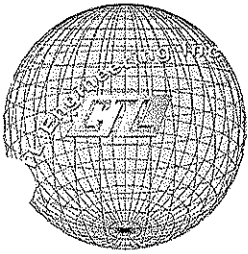
- *Burning Refuse Piles*
- *Impounding Refuse Embankments*
- *Mine Fire Extinguishment*
- *Landslides*
- *Mine Subsidence Stabilization*
- *Stream Quality Enhancement*
- *Highway Relocation Co-Op Agreements*
- *Public Water Distribution Systems*

Relative to Abandoned Mine Land Reclamation and Geotechnical Engineering, CTL Engineering is a leader! During recent corporate history (i.e., the past 27 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, Indiana Department of Natural Resources, Colorado Division of Reclamation, 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 27 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 Project Experience

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 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

WATER IMPOUNDMENTS

- Taylor Creek, WVDEP
- Cypress Emerald Slurry Dam, Cypress Coal
- Amigo Smokeless Impoundment, WVDEP
- Enoch Township Impoundment, ODNR
- Pauline Mine, ODNR
- Marsh Hill, MD Bureau of Mines



MINE DRAINAGE/STREAM RESTORATION

- Deckers Creek, WVDEP
- Whiskey Run, ODNR
- Ocoola 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

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

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

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

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

MINE SUBSIDENCE

- Eccles
- Peninsula
- 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

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

PROJECT EXPERIENCE PROFILE

Project:

Amigo Smokeless Impoundment

Client:

West Virginia Department of
Environmental Protection
Dean Stiltner PM

Location:

Wyoming County, West Virginia

PROJECT FEATURES

CTL Engineering of West Virginia, Inc. provided Engineering Design Services and construction documents necessary for the reclamation of a 300' high slurry impoundment. The site had the potential to impound over 200' head of water and was threatening down-stream structures.

CTL provided the following services: field reconnaissance and subsurface investigation; baseline surveying; soil and water analyses; hydrology and hydraulic calculations including a hydrogeologic mine study; and preparation of specifications and construction plans.



PROJECT EXPERIENCE PROFILE

Project:

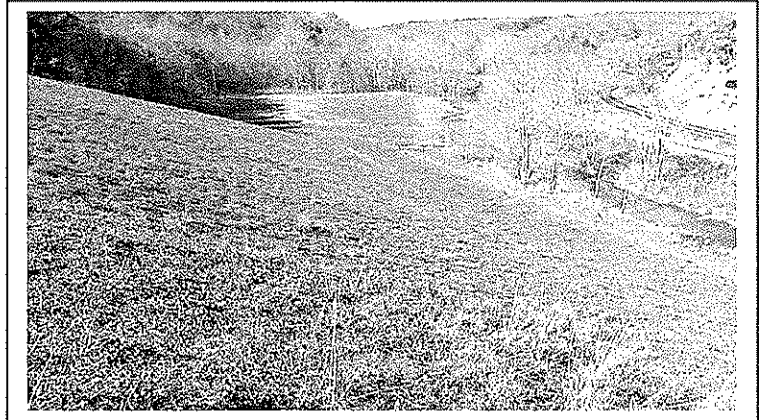
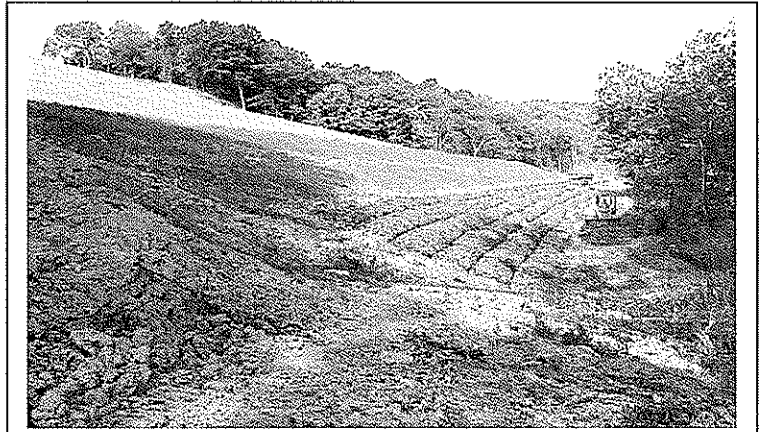
Chickwan Refuse

Client:

ODNR

Location:

Chickwan, Ohio



PROJECT FEATURES

CTL Engineering of West Virginia, Inc. provided Engineering Design Services and construction documents necessary for the reclamation and stabilization of a 40- acre refuse pile that had slid into the adjoining stream, blocking the stream and causing flooding. This project included design and utilization of reinforced slope stabilization and stream bank stabilization.

PROJECT EXPERIENCE PROFILE

Project:

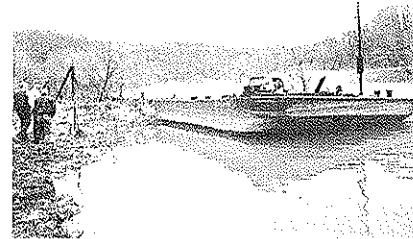
Edna Refuse and Portals

**Client:**

West Virginia Department of
Environmental Protection
Gregg Smith (304) 457-4583

Location:

Monongalia County, West Virginia



Date: December, 1998

Built: McCourt & Sons

Engineer's Estimate: \$1,105,915.00

Actual Cost: \$893,620.00

PROJECT FEATURES

CTL Engineering of West Virginia, Inc. provided Engineering Design Services and construction documents necessary for the reclamation of 57 acres of abandoned mine land near the community of Lowesville, north of the Opekiska Lock and Dam along the Monongahela River.

The project consists of the installation of regrading and revegetation of mine refuse, stabilization of abandoned mine portals, removal and clean-up of an electrical transformer site, and demolition of various mine structures.



PROJECT EXPERIENCE PROFILE

Project:
Majestic Mine Stabilization

Owner:
Ohio Dept. of Natural Resources

Location:
Nelsonville, Ohio



PROJECT FEATURES

CTL Engineering provided engineering investigation and consulting design services for the stabilization of The Majestic Mine complex. Undermining of a tributary of Monday Creek was causing the loss of stream flow via subsidence related fracturing of the streambed. The lost stream flow was introduced into an acid producing mine pool and causing the deep mine to discharge seeps of 4.0 pH mine water. Design of a geosynthetic liner system enabled the stream to retain its base flow, substantially reducing the mine discharge and acid load, and allowing reclamation of a major sludge site. Design was done to allow the maximum naturalization to the stream channel to occur while creating a new impervious streambed.

PROJECT EXPERIENCE PROFILE

Project:

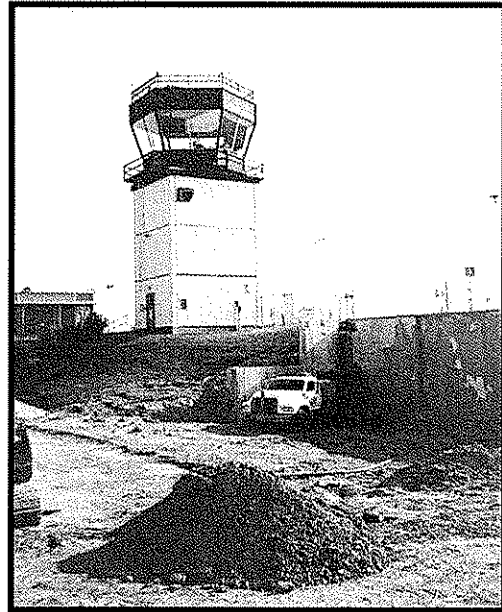
Morgantown Airport Terminal
Mine Subsidence Stabilization Project

Client:

West Virginia Department of
Environmental Protection

Location:

Morgantown, West Virginia



CTL Project Manager:
Patrick E. Gallagher

Date: 1992
Engineer's Estimate: \$750,000.00

PROJECT FEATURES

CTL Engineering completed an extensive subsurface investigation and final design documents for the grout stabilization program beneath the airport terminal. The terminal was approximately 60 feet above an abandoned deep mine complex in the Pittsburgh Coal Seam that historically caused structural damage to the airport buildings.

PROJECT EXPERIENCE PROFILE

Project:
Ohio Valley Plaza

Owner:
THF Realty

Location:
St. Clairsville, Ohio



PROJECT FEATURES

CTL Engineering, Inc. provided engineering design services for the dynamic compaction of surface mine spoil for this project. This service enables the developer to limit settlement within the commercial development plaza. Abandoned surface mines are becoming more important as development sites due to the fact that they are more abundant, less expensive and more topographically attractive. Geotechnical, materials testing, surveying and roofing services were among some of the other services provided by CTL. Some of the larger retail outlets housed in the plaza include Wal-Mart Supercenter, Sam's Club, Lowe's, Kroger, Outback Steakhouse, Applebee's, Circuit City, Red Lobster and Pier 1 Imports.

This site was previously disturbed by past mining activities and no building could take place without the deep dynamic compaction and mine void stabilization. These site improvement techniques made this site fit for construction while reducing site development costs.

Client Reference:

THF Realty -
Mr. Jim Lewis
(314)-429-0900

Cost:

\$35 million (approximately)

Project Completion:

Fall 2001



PROJECT EXPERIENCE PROFILE

Project:
Slab Camp #2

Client:
West Virginia Department of
Environmental Protection

Location:
Preston County, West Virginia



PROJECT FEATURES

CTL Engineering provided Engineering Design Services and construction documents necessary for the reclamation of approximately 5 acres of abandoned mine land near the small Preston County community of Bretz, WV.

The project consisted of the installation of wet mine seals in collapsed and open mine portals, reclamation of scattered coal refuse and abandoned highwall, construction of two separate limestone fine treatment sites, a collection system for numerous mine drainage seeps and installation of limestone channels to provide water treatment.

PROJECT EXPERIENCE PROFILE

Project:

Sovern Run Mine Drainage

Client:

West Virginia Department of
Environmental Protection
Gregg Smith (304) 457-4583

Location:

Preston County, West Virginia



Date: May, 2000

Built: Green Mountain

Engineer's Estimate: \$567,781.00

Design Cost: \$77,499.00

PROJECT FEATURES

CTL Engineering of West Virginia, Inc. provided Engineering Design Services and construction documents necessary for the reclamation of 30 acres of abandoned mine land near the community of Valley Point, WV approximately 5 miles south of Bruceton Mills.

The project consists of the installation of ten mine seals in collapsed and open mine portals, reclamation of scattered coal refuse and abandoned highwall, construct a collection system for numerous mine drainage seep and installation of 2,385 linear feet of limestone channels to provide water treatment.

