Michael Baker Jr., Inc.
A Unit of Michael Baker Corporation
4301 Dutch Ridge Road
Beaver, Pennsylvania 15009

724.495.7711
FAX 724.495.4017

June 26, 2012

State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street, East
Charleston, WV 25305-0103

Attention: Mr. Guy Nisbet, Buyer

Re: Expression of Interest for Professional Mapping and Design Services at the Multiple Bond Forfeited Permit Sites
RFQ Number DEP15901

Dear Mr. Nisbet:

Michael Baker Jr., Inc. (Baker) is pleased to submit this Expression of Interest to provide professional design engineering services for the above-mentioned project. To meet your design requirements, Baker has assembled a team of experienced personnel who have performed on previous similar assignments for the West Virginia Department of Environmental Protection (WVDEP). Our proposed design team members have also provided engineering services for numerous special reclamation related projects over the years for a variety of clients as reflected in the attached documents.

Soil testing and exploratory drilling services, if required, will be provided by sub-consultants with whom Baker has worked in the past. These include Triad Engineering Inc. and Test Boring Services Inc., both of which have a successful history of acting as sub-consultants for Baker and the WVDEP. Blasting related services including blast design and pre-blast surveys, if required, will be provided by Vibra-Tech Engineers Inc.

Baker's staff is experienced in all aspects of AML related projects. Baker has been providing engineering services for abandoned mine lands since the Federal government first enacted AML legislation. We have provided these services for the West Virginia Department of Environmental Protection, Pennsylvania Department of Environmental Protection, Ohio Department of Natural Resources, the U.S. Office of Surface Mining, and US Army Corps of Engineers. Our on-going experience since 1983 with WVDEP gives us the confidence to assure you our assignments will be completed on time and within established budgets.

This submittal illustrates our qualifications and experience to deal with this assignment of work arising from this contract. If you have any questions or require additional information concerning our qualifications, experience or approach, please contact me at 724.495.4273.

Sincerely,

MICHAEL BAKER JR., INC.

Gregory P. Hynes, P.E.
Project Manager

GPH/jm

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

Request for Quotation

RFQ NUMBER	PAGE
DEP15901	1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
GUY NISBET
304-558-8802

VENDOR
RFQ COPY
TYPE NAME/ADDRESS HERE

Michael Baker Jr., Inc.
4301 Dutch Ridge Road
Beaver, PA 15009

SHIP TO
ENVIRONMENTAL PROTECTION
DEPT. OF
OFFICE OF SPECIAL RECLAMATION
105 S. RAILROAD STREET
PHILIPPI, WV
26416-9998 304-457-3219

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
05/23/2012				

BID OPENING DATE: 06/28/2012 BID OPENING TIME 01:30PM

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

MULTIPLE PERMITS DESIGN

EXPRESSION OF INTEREST

THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, IS SOLICITING EXPRESSIONS OF INTEREST FOR PROFESSIONAL MAPPING AND DESIGN SERVICES AT THE BOND FORFEITED PERMITS OF ENERGY MARKETING U-24-84; ROBLEE COAL CO. D-49-82 IN BARBOUR COUNTY, WEST VIRGINIA, ROBLEE COAL COMPANY O-1009-93 AND U-1001-91 IN UPSHUR COUNTY, WEST VIRGINA; AND BUFFALO COAL CO. S-52-80 IN GRANT COUNTY, WEST VIRGINIA PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS.

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

ANY INDIVIDUAL SIGNING THIS BID IS CERTIFYING THAT: (1) HE OR SHE IS AUTHORIZED BY THE BIDDER TO EXECUTE THE BID OR ANY DOCUMENTS RELATED THERETO ON BEHALF OF THE BIDDER, (2) THAT HE OR SHE IS AUTHORIZED TO BIND THE BIDDER IN A CONTRACTUAL RELATIONSHIP, AND (3) THAT THE BIDDER HAS PROPERLY REGISTERED WITH ANY STATE AGENCIES THAT MAY REQUIRE REGISTRATION.

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
William D. Trimble	724.495.4302	June 26, 2012

TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE
Vice President	25-1228638	

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

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

Request for Quotation

RFQ NUMBER	PAGE
DEP15901	2

ADDRESS CORRESPONDENCE TO ATTENTION OF:
GUY NISBET
304-558-8802

VENDOR
RFQ COPY
TYPE NAME/ADDRESS HERE

Michael Baker Jr., Inc.
4301 Dutch Ridge Road
Beaver, PA 15009

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PHILIPPI, WV
26416-9998 304-457-3219

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
05/23/2012				

BID OPENING DATE: 06/28/2012 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
	****** THIS IS THE END OF RFQ DEP15901 ****** TOTAL:					--

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
Willi D. Trichard	724.495.4302	June 26, 2012

TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE
Vice President	25-1228638	

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

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
OSR CONSULTANT QUALIFICATION QUESTIONNAIRE

Attachment "B"

PROJECT NAME	DATE (DAY, MONTH, YEAR)	FEIN
Multiple Permits Design, West Virginia (DEP15901)	June 26, 2012	25-1228638

1. FIRM NAME	2. HOME OFFICE BUSINESS ADDRESS	3. FORMER FIRM NAME
Michael Baker Jr., Inc.	4301 Dutch Ridge Road Beaver, Pennsylvania 15009	

4. HOME OFFICE TELEPHONE	5. ESTABLISHED (YEAR)	6. TYPE OWNERSHIP	6a. WV REGISTERED DBE (Disadvantaged Business Enterprise)
724.495.7711	1940	Individual, **Corporation**, Partnership, Joint-Venture	YES NO

7. PRIMARY OSR DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. OSR DESIGN PERSONNEL EACH OFFICE

Michael Baker Jr., Inc./ 4301 Dutch Ridge Road, Beaver, PA 15009/ 724.495.4302 / William D. Trimbath / 22

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM	8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS
William D. Trimbath, Vice President – 724.495.4302	

9. PERSONNEL BY DISCIPLINE (Bold Lettering Indicates Minimum Design Team Members)

243 ADMINISTRATIVE	2 ECOLOGISTS	1 LANDSCAPE ARCHITECTS	35 STRUCTURAL ENGINEERS
11 ARCHITECTS	1 ECONOMISTS	9 MECHANICAL ENGINEERS	21 SURVEYORS/Technicians
3 BIOLOGISTS	2 ELECTRICAL ENGINEERS	2 MINING ENGINEERS	5 TRAFFIC ENGINEERS
67 CADD OPERATORS	29 ENVIRONMENTALISTS	1 PHOTOGRAMMETRISTS	82 OTHER
1 CHEMICAL ENGINEERS	0 ESTIMATORS	10 PLANNERS: URBAN/REGIONAL	29 (Project Managers)
39 CIVIL ENGINEERS	23 GEOLOGISTS	5 SANITARY ENGINEERS	
47 CONSTRUCTION INSPECTORS / Mgrs.	2 HISTORIANS	9 SOILS ENGINEERS	
67 DESIGNERS	13 HYDROLOGISTS	6 SPECIFICATION WRITERS	765 TOTAL PERSONNEL (Pittsburgh Area Offices)
0 DRAFTSMEN			

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 22

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

10. HAS THIS JOINT-VENTURE WORKED TOGETHER BEFORE?	_YES _NO N/A

11. OUTSIDE KEY CONSULTANTS/SUB-CONSULTANTS ANTICIPATED TO BE USED. Attach "OSR Consultant Confidential Qualification		
NAME AND ADDRESS: Triad Engineering, Inc. (IF Required) P.O. Box 1435 4980 Teays Valley Road St. Albans, West Virginia, 25177	**SPECIALTY:** Drilling, Soil Testing, and Surveying	**WORKED WITH BEFORE** __X__ Yes (20+ years) _____ No
NAME AND ADDRESS: Test Boring Services Inc. (IF Required) 140 Mong Road Scenery Hill PA 15360	**SPECIALTY:** Drilling, Geotechnical Exploration, and Monitoring	**WORKED WITH BEFORE** __X__ Yes _____ No
NAME AND ADDRESS: Vibra-Tech Inc. (IF Required) 109 East First Street Hazleton, PA 18201 (Field office in Scott Depot, WV 25560)	**SPECIALTY:** Blast Consulting, Geotechnical, Inspection, and Monitoring Services	**WORKED WITH BEFORE** __X__ Yes _____ No
NAME AND ADDRESS:	**SPECIALTY:**	**WORKED WITH BEFORE** _____ Yes _____ No
NAME AND ADDRESS:	**SPECIALTY:**	**WORKED WITH BEFORE** _____ Yes _____ No
NAME AND ADDRESS:	**SPECIALTY:**	**WORKED WITH BEFORE** _____ Yes _____ No
NAME AND ADDRESS:	**SPECIALTY:**	**WORKED WITH BEFORE** _____ Yes _____ No
NAME AND ADDRESS:	**SPECIALTY:**	**WORKED WITH BEFORE** _____ Yes _____ No

12. RELEVANT EXPERIENCE. Include number of projects per each discipline

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

YES Description and Number of Projects:

Baker has been assisting state and federal agencies with abandoned mine land (AML) restoration and acid mine drainage (AMD) remediation since 1977. Baker's experience began with Operation Scarlift and now includes well over 200 AML/AMD remediation projects ranging from subsidence control, mine sealing, reclamation of mine refuse piles, strip pit and high wall; drainage improvements, revegetation, stream relocation, restoration of streams and wetlands, landslide correction, and replacement of water supplies affected by abandoned mine lands to abatement of AMD problems. Baker has been assisting West Virginia Department of Environmental Protection with Abandoned Mine Lands Remediation/Mine Reclamation Engineering design services ever since WVDEP initiated its AML Reclamation Program in 1983. In addition to WVDEP, we are also currently assisting PADEP with AML reclamation and AMD remediation designs. The "OSR and related Project Experience Matrix" table provided at the end of this CCQQ shows our experience on OSR/AML related projects for different state agencies and for private clients.

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

YES Description and Number of Projects:

In designing AML reclamation projects, generally three types of soil analysis are needed. These analyses may include: a) geotechnical analysis/soil classification, b) soil analysis for revegetation potential (pH, Acid Base Accounting, Nutrients) and c) soil analysis for hazardous materials. Baker is involved in selecting and collecting the soil samples and analyzing the results of laboratory testing as required for design. Laboratory testing is performed by a subcontractor. Of the thirty (30) most recent AML projects, Baker was involved in soil analysis for 19 projects. Baker has also prepared reprocessing potential evaluations of coal refuse sites (10 projects) which required evaluation of mine refuse based on laboratory test results. Refuse testing for these projects included refuse float/sink and proximate analysis, with results evaluated by Baker to determine BTU content and reprocessing potential.

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

YES Description and Number of Projects:

Baker's hydrology and hydraulic staff for OSR/AML remediation design are experts in the application of hydraulic models that include HEC-1, HEC-2, HEC-RAS, HY8, TR20, TR55, HAESTADS PONDS 2, FLOWMASTER, KYPIPE 2, CYBERNET, SEDCAD 4, UNET, and DAMBRK. Baker applies this experience to services such as stormwater management; culvert analysis; hydrologic and hydraulic studies; storm sewer design; floodplain modeling; channel design; watershed planning; energy dissipation; and waterline extension and distribution.

Expertise in hydrology and hydraulics is essential in any AML reclamation/remediation design. Of the thirty (30) most recent AML projects, twenty six (26) projects needed hydrology/hydraulics expertise of the AML/AMD design group.

12. RELEVANT EXPERIENCE. Include number of projects per each discipline

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

YES Description and Number of Projects:

Since 1983 Baker has been designing AML/AMD remediation projects for WVDEP. For all the projects to date, Baker was provided by WVDEP with contour maps developed from aerial photography of the project site. Baker's responsibility was to verify the topographic map by check field surveying.

Baker has a survey and photogrammetric department with a staff of 82. Baker routinely performs aerial photography and contour mapping for federal and several state agencies as well as for private clients. Baker's Survey and Photogrammetric Department is as old as the company itself; however, Baker always brings the latest technology to the table. Fixed mobile and aerial LiDAR equipment are tools that Baker can offer to add efficiencies to the field mapping process and enhance quality. During the last five years Baker has completed more than 50 mapping projects. Some examples are listed as follows:

Updating Boundary/Site Improvements and Utility Survey – 23 LPOEs, North and South US Borders, US-VISIT (Photogrammetric Mapping and Surveying Services)

Rio Grande Valley Border Fence Boundary Surveys, Cameron and Hidalgo Counties, TX, U.S. Army Corps of Engineers, Forth Worth District (Metes and Bounds Surveys and Legal Deed Descriptions)

Land Port of Entry (LPOE) Aerial Mapping Refresh, North and South US Borders , Department of Homeland Security, US-VISIT (Mapping)

Sewer Infrastructure Location/Verification, Allegheny County, PA, 3 Rivers Wet Weather, Inc., (GPS or Conventional Survey Data by Others)

Open-End Contract for Surveying and Photogrammetric Mapping Services, Statewide Pennsylvania, Pennsylvania Department of Transportation (Through a series of nine open-end contracts, Baker has been providing surveying and mapping services to PennDOT continuously since 1986. Our current contract E01292 runs through November 2012)

Indefinite Delivery Contract A/E for Multidiscipline & Related Services for Dept. of Homeland Security and other Civil/Military Projects, U.S. Army Corps of Engineers, Forth Worth District (Surveying and Mapping)

Border Fence Project – PF225, Various Locations in TX, AZ, NM CA, U.S. Army Corps of Engineers, Fort Worth District (Aerial Photography, Analytical Aerotriangulation, Stereo Mapping Compilation, Digital Orthophotography, Horizontal and Vertical Control Surveys, Geodetic Surveys)

Land Port of Entry (LPOE) Aerial Mapping Refresh, North and South US Borders, Department of Homeland Security, US-VISIT (Aerial Photography, Stereo Mapping Compilation/Topographic Mapping, Horizontal and Vertical Control Surveys, Geodetic Surveys)

12. RELEVANT EXPERIENCE. Include number of projects per each discipline

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

Description and Number of Projects

Digital Orthophoto Production, Scottsdale, AZ, City of Scottsdale (GPS Control Surveys, Color Aerial Photography, Analytical Aerotriangulation, Digital Terrain Modeling, Digital Contour Mapping, Digital Orthophotography)

Cuyahoga County, Ohio CEGIS, Cuyahoga County, Ohio, Cuyahoga County (Data Survey, GPS Ground Control, Digital Orthophotos, Parcel Mapping)

Coordinated County GIS, Allegheny County, PA, Allegheny County GIS Department (Aerial Photography, Digital Terrain Modeling, Color Digital Orthophoto Production, Map Edit)

Baker has performed land reclamation for over 200 AML/AMD remediation projects, of which approximately 80 have included highwall reclamation. The majority of Baker's highwall reclamation and grading design projects have been for the WVDEP, but project designs have also been prepared for ODNR, PADEP, and the US Army Corps of Engineers. The "OSR and related Project Experience Matrix" table provided at the end of this CCQQ shows our experience on highwall reclamation and includes 16 projects for which highwall reclamation was the primary design objective.

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF OSR RELATED DESIGN EXPERIENCE:
Trimbath, William, D., P.E. Vice President	0	16

Brief Explanation of Responsibilities

William D. Trimbath, P.E. is Vice President and Office Principal of Baker's engineering offices in western Pennsylvania. These offices provide civil, mining, municipal, geotechnical, pipelines, mapping and telecommunications services to a variety of clients. More than 100 Baker professional and technical employees serve our clients out of offices in Pittsburgh, Moon Township (Allegheny County) and Brighton Township (Beaver County) under the leadership of Mr. Trimbath.

Mr. Trimbath, who has been at Baker for over 20 years, will oversee general civil activities and management of projects and services provided by Baker teams in this location. He has over 34 years experience in civil, environmental and geotechnical engineering. Most recently he worked for Baker Environmental and managed $100 million in Navy CLEAN activities including over 200 environmental investigation and remediation programs. He also has extensive experience in water and wastewater design and geotechnical construction.

Engineering Services. Pittsburgh Water and Sewer Authority (PWSA). Project Director. Baker has been providing services to PWSA since 1989 for a variety of projects including: Development of a Long-Term Control Plan for Combined Sewer Overflow; Fox Chapel Pump Station and rising Main; Feasibility Study of the Highland Park Reservoir No. 1 Cover; Herron Hill Reservoir Reconstruction and Cover Project; and the Bedford Reservoir Potable Water Storage Tank.

Dennison/Route 800 Reclamation Project for the *Ohio Department of Natural Resources (ODNR)* - Uncontrolled drainage and seepages from coal and clay mines causing metal precipitation in roadside ditch and over flowing onto a major high creating hazardous driving condition. The reclamation plan was developed following test drilling to identify AMD sources. Abatement design included an underdrain to intercept seepage, a sedimentation pond followed by wetland to precipitate iron, improving road-side ditch and the drainage outlet to nearby stream; preparation of construction plans, specifications, and cost estimate are part of this project.

Hardy Coal Company Bond Forfeiture Reclamation Project for the *Ohio Department of Naturals Resources*. The project involved surveying and mapping, reviewing geological data, mine maps; and providing design of the reclamation measures for the site including environmental assessment, regarding, collection ditches, stream relocation, placement of soil cover revegetation; and preparation of construction plans, specifications and cost estimates.

Maple Run Portals and AMD Reclamation for the *West Virginia Division of Environmental Protection* - Test drilling, site grading, sealing mine openings, drainage design, AMD treatment with limestone beds and aerobic Wetland; preparation of construction plans, specifications, and cost estimate.

Emoryville Mine Complex Reclamation for the *West Virginia Division of Environmental Protection* - Test drilling, water quality date review and site survey; design of AMD abatement including open limestone channels, SAPS, aerobic wetlands, in-stream AMD treatment with limestone fines, E & S Control, drainage design including diversion and collection ditches and underdrain; site grading and revegetation; construction plans, specifications, and cost estimate.

Feasibility Study for Ecosystem Restoration, Ely and Pucket Creek Subbasins of Powell River, Virginia for the Nashville District, U.S. Army Corps of Engineers - Site evaluation including geotechnical investigation, review of water quality data, determination of AMD sources at four sites, evaluation of AMD abatement alternatives; AMD abatement design including SAPS Cells, open limestone channel, metal precipitation ponds, aerobic wetlands and alkaline soil amendment; site grading, mine seals, diversion and collection ditches, E & S control, stream relocation; and preparation of plans, cost estimate and feasibility report.

EDUCATION (Degree, Year, Specialization)
Doctoral Studies, Civil Engineering; M.S., 1978, Civil Engineering; B.S., 1974, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Civil Engineers American Society of Civil Engineers, Pittsburgh Geotechnical Group, Chairman, 1986-1987 Society of American Military Engineers, Environmental Action Committee, Secretary Engineering Society of Western Pennsylvania	Professional Engineer, 1978, PA

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF OSR RELATED DESIGN EXPERIENCE:
Hynes, Gregory P., P.E. Project Manager/Senior Engineer	0	21

Brief Explanation of Responsibilities

Mr. Hynes is an engineer with a background in reclamation of abandoned mine lands, including acid mine drainage abatement, earthwork and grading plans preparation, hydrologic and hydraulic analysis, and erosion and sediment control structures. He also has extensive experience in the design of water distribution systems, hydraulic structures, and sanitary collection systems; and permitting of mining facilities. At Baker, he has worked on over thirty abandoned mine land reclamation projects which include reclamation of coal refuse piles, sealing of mine portals, grouting for mine subsidence, treatment of passive and active water, evaluation of pre-law mining impacts on drinking water supplies, and restoration of stream channels. Many of these projects have been for the West Virginia Department of Environmental Protection, Abandoned Mine Lands and Reclamation Office. He has also served as project engineer for over 30 water distribution projects located in Ohio, Pennsylvania, and West Virginia.

Colliers Sportsman's Club Highwall, Brooke County, West Virginia. *West Virginia Department of Environmental Protection.* Project Manager/Senior Engineer. Responsible for drilling by sub-consultants, overseeing assistant engineers, perform research of geological data and mining maps, review of water quality data, preparation of WV Stormwater and WVDOH permits. Prepared construction plans and specifications for the project which included erosion and sedimentation control measures, site clearing, grubbing and grading, wet mine seals, one bate gate, HDPE culverts, diversion and collection channels, soil cover placement, temporary mine water treatment, and revegetation.

Simpson Highwall, Barbour County, West Virginia. *West Virginia Department of Environmental Protection.* Project Manager/Senior Engineer. Responsible for drilling by sub-consultants, oversaw assistant engineers, performed research of geological data and mining maps, review of water quality data, preparation of WV Stormwater, USACE, and WVDOH permits. Prepared construction plans and specifications for the project which included erosion and sedimentation control measures, site grading, mine seals, HDPE culverts, a WVDOH box culvert crossing SR 76, grouted rip rap collection channels, soil cover placement, and revegetation.

Wymer Portals and Refuse & Davidson Highwall, Monongalia County, WV. *West Virginia Department of Environmental Protection.* Project Manager/Senior Engineer. Arranged for mapping and drilling by subconsultants, oversaw assistant engineers, performed research of geological data and mining maps, review of water quality data, preparation of USACE and WVDOH permits for stream channel relocation and highway crossings. Prepared construction plans and specifications and attendance at pre-bid and preconstruction meetings for the project which included erosion and sedimentation control measures, site grading, mine seals, bat gates, reestablished and relocated stream channels, open limestone channels, collection and diversion ditches, backfilling a dangerous highwall, soil cover placement, and revegetation.

Chalk Mountain Mine and Dump Site 4, Spruce Pine, N.C. *The Feldspar Corporation.* Project Manager. Duties included site investigation and preparation of disposal and reclamation plans for a strip mine including E&S controls and ponds, surface water ditches, soil cover placement, and revegetation. The project included review of available site rock and soils data, design and preparation of construction plans, narratives, and specifications.

Miller Mountain Feasibility Study, Preston County, WV. West Virginia Department of Environmental Protection. Senior Engineer. Provided conceptual water system evaluation and distribution system extension requirements including design, cost estimate, and narrative as part of a feasibility report which assessed pre-law mining impacts to local groundwater and provided water supply alternatives including the extension of a nearby distribution system.

Kempton Refuse and AMD, Tucker County, WV. *West Virginia Department of Environmental Protection.* Senior Engineer. Performed research of geological data and mining maps, review of water quality data, and design of acid mine drainage abatement measures, including open limestone channels, a limestone pond, a Successive Alkalinity Producing System, and an aerobic wetland. Prepared construction plans and specifications and attendance at pre-bid and preconstruction meetings for the project which included erosion and sedimentation control measures, site grading, mine seals, rock underdrains, collection and diversion ditches, backfilling a dangerous highwall, soil cover placement, revegetation, and reforestation.

Fort Gordon Mine Closure Plans, Augusta, Georgia, US Army Corps of Engineers, New Orleans District. Task Manager Duties included site investigation and preparation of reclamation plans including E&S controls, surface water ditches, soil cover placement, backfilling of highwalls, and revegetation as required for permanent closure of seven mining sites at Fort Gordon, Georgia. The project included review of available site water, rock, and soils data, design and preparation of construction plans, narratives, and specifications.

Borgman Portals and Refuse, Preston County, WV. *West Virginia Department of Environmental Protection.* Senior Engineer. Duties included research of geological data and mining maps, review of water quality data, and initial design of acid mine drainage abatement measures including open limestone channels, limestone ponds, and aerobic wetlands. Final design was provided without wetlands and ponds per request of the client. Prepared construction plans and specifications and attendance at pre-bid and preconstruction meetings for the project, which included site grading, mine seals, collection and diversion ditches, soil cover placement, and revegetation.

EDUCATION (Degree, Year, Specialization)	
M.S., 1997, Civil Engineering; B.E., 1987, Civil Engineering	
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	**REGISTRATION (Type, Year, State)** Professional Engineer, 1998, WV; Professional Engineer, 1993, PA Professional Engineer, 1998, OH; Professional Engineer, 2001, VA

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR OSR PROJET DESIGN. (Furnish complete Data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF OSR RELATED DESIGN EXPERIENCE:
George P. Kay, P.E. Sr. Consultant - Water Quality Engineering	0	15

Brief Explanation of Responsibilities

Mr. Kay has extensive experience solving problems related to water quality, water and wastewater treatment, and aquatic ecosystem restoration. He has completed projects for the U.S. Coast Guard, Army, National Guard Bureau, Navy, National Park Service, and Department of Energy; twelve State government agencies; sanitary and hydropower authorities; and major representatives of the ferrous and non-ferrous metals, mining, power, petroleum, coal bed methane and shale gas, chemical, rail, air freight, insurance, site remediation, telecommunications, manufactured products, entertainment and construction industries. Areas of practice include Clean Water Act and Safe Drinking Water Act compliance assistance, design and operational troubleshooting of treatment plants, aquatic impact assessment, root cause analysis of problems with finished waters (e.g., permit excursions, aquatic toxicity, product defects, potability/suitability, treatment costs, scaling and corrosion, etc.), source water evaluations, training of engineers and treatment plant operators, and lake/lagoon management. He has served as Project Manager for systems treating sewage, industrial wastewater, acid mine drainage, contaminated groundwater, and potable water, built across ten States and at eight locations overseas, and has served on due diligence teams for numerous corporate acquisitions and divestitures, spill investigations, and routine EHS audits. Compliance assistance, troubleshooting assignments, and watershed investigations completed across 42 States and at locations overseas. Prior to joining Baker, Mr. Kay was Senior Staff Engineer (Water and Wastewater) for a *Fortune 500* steel producer.

Dumans Treatment Plant Evaluation, Barr Township, Ebensburg, Pennsylvania. *Pennsylvania Department of Environmental Protection.* Project Manager. Responsibilities included directing activities of multi-disciplinary engineering team investigating avenues to reduce wastewater treatment costs and improve operations at the pumping station, treatment plant, and sludge lagoons. Work involved review of records; field measurements, bench scale treatability studies; preparation of cost estimates; and preparation of a final report summarizing findings and recommendations. Baker performed a comprehensive audit and provided operational troubleshooting for a 9.4-million-gallon-per-day acid mine drainage pumping station and wastewater treatment plant. The project was performed wholly in-house with a multidisciplinary team of chemical, environmental, hydraulic, mining, and electrical engineers. The team was charged with finding avenues to materially reduce the annual operation and maintenance cost of this facility while maintaining compliance with applicable effluent limitations.

Lancashire Number 15 Acid Mine Drainage Treatment Facility Design, Barr Township, Pennsylvania. *Pennsylvania Department of Environmental Protection.* Project Manager. Responsible for directing team of chemical, environmental, structural, civil, mechanical, and electrical engineers charged with developing plans, technical specifications, and permit applications for a 11 MGD acid mine drainage treatment plant. Responded to RFIs and review submittals by Construction contractor for new AMD Treatment Plant. Baker designed an 11-million-gallon-per-day acid mine drainage treatment plant consisting of extraction wells; a pre-aeration tank; a neutralization tank; a treatment building with laboratory, office, and controls; a sludge conditioning tank; lime and polymer storage and handling systems; a terminal pond; and a sludge injection system. Baker also prepared plans, specifications, and a construction cost estimate and provided bid and construction phase services.

General Technical Assistance for the Pennsylvania Superfund Program, Statewide, Pennsylvania. *Pennsylvania Department of Environmental Protection.* Project Manager. Responsible for directing field and laboratory investigations into the corrosion potential of flexible stainless steel connectors beneath gasoline dispensers at convenience stores across the Commonwealth. Under two consecutive general technical assistance contracts, Baker provided environmental consulting services for sites that had been identified as threats to public health or the environment, but did not qualify for inclusion on the U.S. Environmental Protection Agency's National Priorities list. Baker's services included project management, storage tank management and closures, site characterizations, feasibility studies, engineering design and construction inspection, emergency water provisions, public involvement support, and third-party reviews. Baker completed 92 work assignments under these two contracts.

Assessment of Human-Health Risks from 1,4-Dioxane Exposure and Analysis of Alternatives for Groundwater treatment, Bucks, Chester, and Montgomery Counties, Pennsylvania. *Pennsylvania Department of Environmental Protection.* Environmental Engineer. Responsible for white paper and alternatives evaluation for treatment of groundwater at sites contaminated with dioxane. Under a general technical assistance contract, Baker conducted an in-depth study of the chemical compound, 1,4-dioxane, as it relates to groundwater contamination within southeastern Pennsylvania. The study consisted of development of a human health-based risk assessment for the compound in residential, commercial, and mixed-use environments. Upon completion of the risk assessment, Baker prepared an alternatives analysis for potential treatment options for groundwater impacted by 1,4-dioxane.

Currie Landfill and Kelly Farm Sludge Lagoon Remediation Design, Millcreek and Fairview Townships, Pennsylvania. *Pennsylvania Department of Environmental Protection.* Environmental Engineer. Responsible for sludge stabilization study and specifications for pore water treatment. Baker is performing a wetland investigation and delineation at the Currie Landfill site, and is developing construction drawings, technical specifications, and permit documents to construct interim remediation measures for the Currie Landfill site and the Kelly Farm sludge lagoon. Baker's services include project management; subconsultant procurement; wetland site survey, delineation, and jurisdictional determination; development of plans, specifications, and cost estimates; and preparation of permit documentation.

EDUCATION (Degree, Year, Specialization)

M.S., 1982, Civil Engineering; M.S., 1976, Environmental Health, University of Pittsburgh; B.S., 1975, Biological Sciences, University of Pittsburgh

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Civil Engineers Society of American Military Engineers	Professional Engineer, Pennsylvania, 1986; Ohio, 1996; Certified Class A Water System Operator, Pennsylvania, 1986; Certified Class A Wastewater System Operator, Pennsylvania, 1986

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR OSR PROJET DESIGN. (Furnish complete Data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF OSR RELATED DESIGN EXPERIENCE:
Dziubek, John A., P.E. Project Manager	0	15

Brief Explanation of Responsibilities

Mr. Dziubek has performed and managed engineering and design projects for more than 30 years. The projects range from subsurface investigations; building, industrial, and heavy and highway foundations; and site closures at industrial facilities; to remedial design and remedial action at Superfund sites. He has managed public and private sector projects for the Corps of Engineers, U.S. Navy, State DOT's, and major industrial clients. Larger projects have ranged from $1 million to $10 million and have required civil, geotechnical, mining and environmental engineering expertise.

Chalk Mountain Dump Site 4, Spruce Pine, N.C. *The Feldspar Corporation.* Project Manager. Duties included site investigation and preparation of plans and permit submission documents for a disposal area at an existing feldspar strip mine including slope stability analysis, grading, E&S controls, sedimentation pond enlargement, surface water ditches, soil cover placement, final reclamation plans, and revegetation. The project included review of available site rock and soils data, design and preparation of construction plans, cost estimates, narratives, and specifications.

Various Reserve Analyses and Mine Planning Projects, Ohio, Pennsylvania, Virginia, Kentucky, West Virginia and North Carolina. *Ohio Edison, Veon Coal, Ashland Coal, Virginia Pocahontas, Koppers Company.* Project Manager. Managed reserve analysis and mine planning projects for coal mines. These project required computer models for determining mineral reserves, stockpile inventories, mining simulation, long range planning, cost studies, mine drainage, mine subsidence, and production monitoring.

Geotechnical Engineering Services, Ohio, West Virginia and Pennsylvania. *U.S. Office of Surface Mining.* Project Manager. Managed engineering services contract for more than 40 abandoned mine lands projects for the U.S. Office of Surface Mining. The projects required surveys, mapping, subsurface investigations, plans, specifications, and construction inspection. Mining-related problems included flood studies, mine subsidence, underground mine fires, mine drainage, vertical shaft filling, gob piles, landslides, refuse fires, grouting programs, and surface mine reclamation. Construction costs for project implementation were more than $12 million.

Various Reclamation Projects, Ohio and West Virginia. *Ohio Department of Natural Resources and the West Virginia Department of Natural Resources.* Project Manager. Managed abandoned mine lands projects for the Ohio Department of Natural Resources and the West Virginia Department of Natural Resources. Projects included mine subsidence, flood studies, landslides, mine drains, mine seals, mine fires, mine stabilization and refuse bank reclamation. Construction costs were over $5 million.

Various Coal Refuse Facilities Geotechnical Design, Ohio, Pennsylvania, West Virginia, Illinois, Virginia and Kentucky. *North American Coal, Bethlehem Mines, Diamond Shamrock Coal, Exxon Coal, Sierra Coal.* Geotechnical Manager. Supervised the geotechnical design of coal slurry impoundments and coal refuse embankments. Upstream and downstream construction methods were used. Design analyses included slope stability, hydrology and hydraulics, and structural design of primary and emergency spillway systems.

Unimin Trailings Dam Expansion, Virginia. *Unimin Corporation.* Project Manager. Managed design and construction phase of a phased capacity increase of a tailings dam for an industrial glass sand plant and quarry. The main embankment and dike were raised, the spillway redesigned, and the outlet pipe extended. Piezometric instrumentation was installed to monitor the phreatic surface through the main embankment.

EDUCATION (Degree, Year, Specialization)
M.S.C.E., 1966, Civil Engineering; B.S.C.E., 1964, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Civil Engineers Society of American Military Engineers	Professional Engineer, 1969, PA; Professional Engineer, 1990, WV Professional Engineer, 1991, OH

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF OSR RELATED DESIGN EXPERIENCE:
Dooley, Michael J. Mapping Supervisor	0	0

Brief Explanation of Responsibilities

Mr. Dooley has successfully managed at least 500 projects in a project manager or production manager role over the past 12 years. Projects ranged from large multi-million dollar nationwide mapping in the Caribbean utilizing various subcontractors, softwares and technologies to produce planimetry/topology and orthophotography to large-scale site mapping to provide high accuracy terrain data, planimetric data and pixel resolutions required for engineering specific projects.

He is well-versed through either having worked directly in or acquired specific technical knowledge of: flight planning, control planning, airborne GPS/IMU operations, aerotriangulation (automated and manual), LiDAR operations, film based and digital cameras, DTM and DEM compilation, GIS Mapping, transmission line and pipeline profiling, volumetrics for volume reporting, orthophotography and image rectification, vector based CAD editing, quality control, preparation of responses to RFP/LOI/RFQ, estimating.

He has served diversified customer contacts including multiple state and county governments, quasi-governmental organizations (E911, Councils of Government), city governments, public utilities, private utilities, mining and materials, appraisal districts. Engineering companies in support of oil and gas facilities and pipelines, electrical facilities and transmission. Engineering companies in support of residential, commercial and industrial development. FAA Commercial, International and General Aviation airports.

Experience

Production Manager
Tri-County Aerial Acquisition Project in conjunction with Frederick County, Maryland- 4 County Project – Frederick, Washington, Allegany, and Garrett Counties
Utilized LiDAR data and addition of DEM breaklines, produced 6" orthoimagery tiles, 1"=100'planimetric data including; building footprints, edge of pavement, stream channels, forested areas, driveways, parking, medians, ponds, fences & railroad tracks and 2' contours for Allegany County Government (allconet).

Project Manager
Bexar Metro 911 Network District, San Antonio, Texas - 3 County Project – Bexar, Comal, and Guadalupe Counties
Utilized digitally captured aerial photography, produce 6" pixel black and white orthoimagery, black and white was requested specifically by client. Generated DTM data which was yearly updated over three years. Digitized all roadway (public and private) centerline data, with yearly updates.

Project Manager
Dominican Republic, Countrywide mapping – "Irrigated Areas Mapping project - Irrigation Systems Management Studies"
Flew entire country, provided 12,000 frames of imagery in both digital and hard copy form to The National Government". Produced 0.5m pixel CIR and color imagery for specific irrigated areas.
Produced 1m contours from DTM acquired data, 1"=200' planimetric data.

EDUCATION (Degree, Year, Specialization)	
Suffolk County Community College – Civil Technology 1983 – 1987	
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	**REGISTRATION (Type, Year, State)**

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF OSR RELATED DESIGN EXPERIENCE:
Henry, James R., P.E. Senior Engineer	0	9

Brief Explanation of Responsibilities

Mr. Henry is a Geotechnical Engineer responsible for the development of subsurface explorations, preparation of geotechnical analyses, submission of design reports, and participation in proposal development. He has more than ten years of engineering experience in geotechnical investigations and construction consultation for a wide range of transportation, building, energy and dam projects.

Slope Stability Analysis, Pittsburgh, Pennsylvania. *Pennsylvania Department of Transportation.* Assistant Engineer. Conducted slope stability analysis and developed recommendations for embankments on a proposed limited access highway to Pittsburgh International Airport.

Landslide Remediation Design, Wheeling, West Virginia. *U.S. Army Corps of Engineers, Baltimore District.* Engineer. Participated in a landslide remediation design and construction project for an Army Reserve Center.

Rock Slope Remediation, Pittsburgh, Pennsylvania. *Port Authority of Allegheny County.* Engineer. Participated in rock slope investigations and in the development of slope remediation plans for the Airport Busway.

Landslide Slope Stability Analysis, Armstrong County, Pennsylvania. *Buckeye Pipeline Company.* Assistant Engineer. Conducted slope stability analysis for landslide remediation.

Rock Slope Investigation, Bedford, Pennsylvania. *Pennsylvania Turnpike Commission.* Engineer. Participated in a rock slope analysis and in the development of slope remediation plans and specifications.

Detention Pond Investigations, Mars, Pennsylvania. *The Trees Development Corporation.* Assistant Engineer. Performed subsurface investigations and slope stability analyses of 10 detention pond embankments for a residential development.

Detention Pond Stability Analysis, Morgantown, West Virginia. *Allegheny Power Service Corporation.* Assistant Engineer. Analyzed stability of several detention ponds for an ash disposal site.

Roadway Embankment Analysis, Chippewa to New Castle, Pennsylvania. *Pennsylvania Turnpike Commission.* Assistant Engineer. Analyzed several roadway embankments for the Beaver Valley Expressway that runs from Chippewa to New Castle.

Soil Reports and Construction Specifications, Pittsburgh, Pennsylvania. *Pennsylvania Department of Transportation.* Assistant Engineer. Prepared soil reports and construction specifications for Southern Expressway at Pittsburgh International Airport.

EDUCATION (Degree, Year, Specialization)
M.S., 1998, Civil Engineering; B.S.E., 1988, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
N/A	Professional Engineer, 1993, PA; Professional Engineer, 1993, MD

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF OSR RELATED DESIGN EXPERIENCE:
Zang, Scott D., P.E. Senior Engineer	0	15

Brief Explanation of Responsibilities

Mr. Zang is a geotechnical engineer experienced in site investigation and design. His professional experience encompasses reconnaissance, field testing, laboratory testing, project analysis and design, report preparation and construction inspection for roadways, railroads, earth dams, buildings, hazardous waste studies, industrial facilities, airports and coal mines. His design experience also includes abandoned mine land reclamation and innovative AMD abatement design.

Raw Water Pump Station & Transmission Main, Wellsville, Ohio. *Southern Columbiana County Regional Water District.* Assistant Technical Manager. Performed the geotechnical investigation and made design recommendations for construction of a 30 foot deep dry well receiving water from a new intake system placed in the Ohio River. The design included evaluation of buoyancy effects, temporary shoring for the dry well and the intake piping, and remediation of a soft clay layer that would be encountered at the base of the excavation for the dry well.

Coal Refuse Pile Remediation Design Analysis and Plans, West Virginia. *West Virginia Department of Environmental Protection.* Engineer. Performed design analysis and prepared construction plans, specifications and cost estimates for remediation of several abandoned coal refuse piles. Projects included regraded slope stability analysis, retention structure design, subsurface water control and facilities design for surface water control of burning and non-burning refuse piles.

Coal Mine Subsidence Remediation Construction Plans, West Virginia. *West Virginia Department of Environmental Protection.* Engineer. Prepared construction plans, specifications and cost estimates for remediation of areas affected by subsidence of abandoned underground coal mines.

Private Residence Subsidence Evaluations, Western Pennsylvania. U.S. *Department of the Interior, Office of Surface Mining.* Assistant Engineer. Performed subsurface investigations to evaluate subsidence and subsidence-related incidents at several private residences. Project included surface distress cause determination and recommendation of remedial measures.

Manor Mine and Preparation Plant, Greene County, Pennsylvania. *Consolidation Coal Company.* Assistant Engineer. Conducted field testing program for foundations of several support buildings, a preparation plant, and coal storage silos.

Landini Mine Fire Remediation, Elizabeth, Pennsylvania. *U.S. Department of the Interior, Office of Surface Mining.* Assistant Engineer. Performed subsurface investigations and designed remedial measures to control a fire in an abandoned underground coal mine.

Acid Mine Drainage Abatement Project, Barton, Ohio. *Ohio Department of Natural Resources.* Engineer. Conducted water sampling program and field investigation during development of acid mine drainage abatement procedures at an abandoned underground coal mine and coal refuse area. Handled administration and office engineering during implementation of remedial measures.

Groundwater Monitoring Well Construction and Sampling, Pennsylvania and West Virginia. *Various Clients.* Assistant Engineer. Assisted with sampling and constructing groundwater monitoring wells at various locations.

EDUCATION (Degree, Year, Specialization)
BS, 1980, Geological Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Civil Engineers	Professional Engineer, 1985, PA

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF OSR RELATED DESIGN EXPERIENCE:
Martin, Mark R., PG Assistant Geologist I	0	10

Brief Explanation of Responsibilities

Mr. Martin is a geologist with experience in conducting and reporting results of geotechnical investigations including geologic research, site reconnaissance, preparing test drilling contracts, test boring inspection, and geotechnical laboratory testing.

North Fork of Yellow Creek AMD Abatement, Jefferson County, Ohio. *Nashville District, U.S. Army Corps of Engineers.* Project Geologist. Duties included: Coordinating with the drilling firm; locating borings; inspecting test borings, including logging soil from auger cuttings and standard penetration tests and logging rock core from NX or NQ coring to determine coal refuse thickness, overburden thickness over mine portals and delineating mine voids; installing standpipe piezometers in mine voids to monitor water levels; performing field permeability tests in boreholes; selecting samples for laboratory testing, including classifications, nutrient analysis, compaction testing, and permeability testing; preparing typed boring logs from field originals using LogDraft program; coordinating with the Project Manager during field activities.

Mine Drainage Subsurface Investigation, Clarksburg and Fairmont, West Virginia. *West Virginia Department of Energy.* Project Geologist. Conducted site reconnaissance, monitored test borings to identify mine voids and installed standpipe piezometers to evaluate presence of mine pools for mine drainage investigation.

Mine Subsidence Subsurface Investigation, MacArthur, West Virginia. *West Virginia Department of Environmental Protection.* Project Geologist. Logged soil and rock core to identify mine voids and produced final test boring records to produce mine stabilization program.

Abandoned Mine Lands Project, Cheat Lake, West Virginia. *West Virginia Department of Environmental Protection.* Project Geologist. Oversaw test drilling activities to determine amount and location of coal mine spoil/refuse, collected acid mine drainage samples for testing, installed piezometers and produced final test boring records.

Abandoned Mine Lands Project, Masontown, West Virginia. *West Virginia Department of Environmental Protection.* Project Geologist. Conducted a site reconnaissance at four areas within the project location. Oversaw test drilling activities (i.e., logging soil and rock core) to determine amount/extent of coal mine spoil/refuse within the four designated areas, collected water samples from acid mine drainage locations, and produced final test boring records.

Abandoned Mine Lands Project, Ely and Puckett Creeks, Virginia. *Virginia Department of Mines, Minerals and Energy.* Project Geologist. Conducted a site reconnaissance for four sites in southwestern Virginia. Oversaw test drilling activities including logging soil and rock core, conducted bore hole permeability tests, and conducted a survey of local residence for a Hazardous, Toxic, and Radiological Waste Investigation Report.

Waterline Feasibility/Extension Project, Berwind, West Virginia. *West Virginia Department of Environmental Protection.* Project Geologist. Conducted a site reconnaissance, logged soil and rock core along the proposed alignment, collected water samples, and produced final testing boring records.

EDUCATION (Degree, Year, Specialization)
B.S., 1988, Geology

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State) Professional Geologist, 1995, PA

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF OSR RELATED DESIGN EXPERIENCE:
Heilman, Gregory A., P.E. Senior Engineer	0	9

Brief Explanation of Responsibilities

Mr. Heilman is a civil engineer with extensive professional experience including hydrologic and hydraulic analysis, environmental permitting and engineering, solid and hazardous waste management, and construction services.

Project engineer for the remedial design of the Buckeye Reclamation Landfill Superfund Site, located in Belmont County, Ohio. Responsible for overall site design including developing final grading plans; details; construction sequencing and schedule; and construction cost estimate. Responsible for designing the erosion and sediment control plan and the surface water management plan, which included relocating and lining 5,000 feet of an existing stream. Assisted in the preparation of the final report, technical specifications, Operation and Maintenance Plan, and Construction Quality Assurance (CQA) Plan.

Project engineer for the preparation of a solid waste permit application for a 120-acre restricted waste landfill for U.S. Steel Gary Works, Indiana. Primary responsibilities included coordination of site design, preparation of construction drawings, and preparation of a detailed construction cost estimate. Site design work involved development of grading plans, surface water management, leachate collection system, construction details and sequencing, liner and cover installation.

Project engineer for the development of several closure and post-closure plans for HWT-2 Neutralized Waste Acid Lagoons for U.S. Steel Gary Works, Indiana. Responsible for all aspects of the permit applications including developing closure concepts; site grading; drainage and erosion control; sludge stabilization; cap and cover design; preparation of drawings and technical specifications; a construction quality assurance plan; and cost estimates. The most recent alternative included groundwater extraction and the design of slurry walls.

Assisted in a feasibility study to evaluate dry disposal alternatives for flue gas desulfurization sludge and fly ash for Pennsylvania Power Company Bruce Mansfield Power Station. The project included comparing the alternatives for preliminary costs, technical feasibility and performance to meet all applicable regulations. Involved extensively in sludge dewatering options, the addition of dry additives, dry disposal operations, cost evaluation and screening and comparing of alternatives.

Site engineer for a waste removal/site remediation project in Carnegie, Pennsylvania. Managed removal operations for contaminated soil, conducted soil sampling, wrote inspection reports, inspected site backfill, and provided overall supervision of site activities.

Performed engineering design for the closure of an existing sludge bed at a hazardous waste surface impoundment for Armco Advanced Materials Company, Butler Works, Pennsylvania. Design included site grading, sludge settlement investigations, impermeable cover design, and storm water control facilities design.

Project engineer for the preparation of a permit application for the closure of a solid waste disposal facility for LTV Steel Hennepin Works, Hennepin, Illinois. Responsible for the development of the closure and post-closure plans including site grading; final cover design; drainage and erosion control; cost estimates; construction quality assurance plan; technical specifications and design drawings. Responsible for developing conceptual designs and cost estimates for various alternatives for the removal and disposal of 21,000 cubic yards of sludge for the closure of an existing sludge lagoon.

EDUCATION (Degree, Year, Specialization)
B.S., 1988, Civil and Environmental Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
	Professional Engineer, 2007, WV; Professional Engineer, 1992, PA; Professional Engineer, 1998, OH;

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF OSR RELATED DESIGN EXPERIENCE:
David K. Saylor, P.E. Geotechnical Project Manager	0	25

Brief Explanation of Responsibilities

Southern Expressway Construction, Pittsburgh International Airport: Onsite professional engineer for excavation and disposal of municipal wastes within the right-of-way of a major highway construction project. Excavated wastes were disposed in a permitted onsite landfill while contaminated industrial wastes were disposed offsite in a non-RCRA disposal facility. Drums encountered during excavation were overpacked and delivered to an offsite RCRA incinerator and disposal facility. Approximately 465,000 cubic yards of solid waste and 280,000 cubic yards of unclassified soils were excavated.

EPA Superfund Site, Summit Ohio: Investigator for field investigation, drilling, sampling, and well installation for an abandoned hazardous waste incinerator site listed as a priority EPA Superfund site. Fieldwork was performed to support RIFS work.

Abandoned Mine Land Reclamation Program, West Virginia: Engineer for abandoned mined land projects in West Virginia. The majority of these projects involved the reclamation of abandoned, unstable coal refuse embankments. Prepared investigation programs to evaluate engineering and vegetation properties of materials, analyzed data to develop stable final configurations, and prepared contract documents, including drawings, specifications and cost estimates. Supervised the monitoring of construction for these projects.

Office of Surface Mining Contractor: Performed investigations and designed mitigation methods for numerous structures damaged by deep mine subsidence in the Tri-State area as a contractor of Office of Surface Mining.

General Geotechnical Projects: Performed and directed numerous geotechnical foundation investigations to develop recommendations for the design of foundation systems for both individual commercial office buildings and major mall developments. Scoped and implemented investigation programs, logged materials encountered, prepared geologic sections, and developed laboratory testing programs. Analyzed results of investigation to develop opinions and on most appropriate foundation systems and parameters for system design.

General Coal Refuse Design Projects: Designed coal refuse slurry impoundments and refuse piles in West Virginia, Virginia, and Kentucky. Monitored investigation programs, including the drilling of borings and performance of in-place bedrock permeability packer testing. Services provided include stormwater runoff calculations, flood routing, embankment stability, permit application preparation, design drawings, and report development.

Grove City Factory Shops, Grove City Pennsylvania: Engineer of record for the design of a water supply, storage, treatment, and distribution system for a major retail center in Pennsylvania. The water distribution system was approximately 2.5 miles long and supplied water to residences and businesses along the route. The source of water was a new community groundwater well.

Grove City Factory Shops, Grove City Pennsylvania: Engineer of record for the design of an approximate 5 mile long sanitary sewer system to provide sewer for a major retail center in western Pennsylvania. The system was designed as a gravity flow system and required two pump stations to overcome hilly terrain. The system was designed as a gravity system to permit residences along the route to tap in and eliminate their on lot systems.

AEG Building, Southpointe Business Park, Canonsburg, Pennsylvania: Developed investigation plan and designed and implemented repair for a landslide at a major industrial facility in Southwestern Pennsylvania. The toe of the embankment was immediately adjacent to a public roadway and public utilities.

Allegheny Power Company, Hatfield Power Station, Greene County, Pennsylvania: Project manager for the redesign, repermitting, and construction of an approximate 30-acre dry coal combustion byproduct disposal area designed in accordance with revised Pennsylvania Residual Waste Regulations. Mr. Saylor served as Engineer-of-Record for both the design and construction of the facility.

EDUCATION (Degree, Year, Specialization)
B.S., 1981, Civil Engineering; A.S., 1975, Business Administration

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Civil Engineers	Professional Engineer, PA, 1988; Professional Engineer, OH, 1995

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF OSR RELATED DESIGN EXPERIENCE:
LaMont, Michael J. CAD Designer	0	20

Brief Explanation of Responsibilities

Mr. LaMont is a designer with a background in pipelines, telecommunications, reclamation of abandoned mine lands including acid mine drainage abatement, earthwork, grading plans, stream channel restoration, sealing of mine portals and reclamation of coal refuse piles. While at Baker he has worked on many abandoned mine land reclamation and mine shaft site design and permitting projects. His site / civil qualifications also consist of parking lot layout and design, roadway geometry, right-of-way acquisition, drainage, storm sewer and sanitary sewer design. Additional telecommunications experience include fiber optic cable construction and installation drawings along highways, railroads and cross country routes, as well as stream and road crossing drawings and cross sections, and state, local and environmental permit drawings.

He has 2 years international experience providing services for Baker.

Maple Run Portals and Tipple, West Virginia. *West Virginia Division of Environmental Protection.* Prepared construction plan, profile, detail, and cross section sheets and earthwork balancing for the project, which included, site grading, mine seals, collection and diversion ditches, placement of soil cover, and revegetation.

Emoryville Mine Complex, West Virginia. *West Virginia Division of Environmental Protection.* Prepared construction plan, profile, detail, and cross section sheets and earthwork balancing for the project which included erosion and sedimentation control measures, site regrading, mine seals, collection and diversion ditches, removal of abandoned barges and coal refuse from the North Branch of the Monongahela River, placement of soil cover, and revegetation.

Watson Portal and Refuse Reclamation, West Virginia. *West Virginia Division of Environmental Protection.* Prepared construction plan, profile, detail, and cross section sheets and earthwork balancing for the project which included erosion and sedimentation control measures, site regrading, mine seals, collection and diversion ditches, removal of abandoned barges and coal refuse from the North Branch of the Monongahela River, placement of soil cover, and revegetation.

Dennison/Route 800, Ohio. *Ohio Department of Natural Resources, Division of Mines and Reclamation.* Prepared construction plan, profile, detail, and cross section sheets and earthwork balancing for the project which included erosion and sedimentation control measures, site regrading, mine seals, collection and diversion ditches, placement of soil cover, and revegetation.

Hardy Coal Company Bond Forfeiture, Ohio. *Ohio Department of Natural Resources, Division of Mines and Reclamation.* Prepared construction plan, profile, detail, and cross section sheets and earthwork balancing for the project which included erosion and sedimentation control measures, site regrading, collection ditches, and revegetation.

15 years experience using CADD as design/production tool in daily assignments and able to utilize advanced capabilities of the software:

- AutoCAD 2000i
- AutoCAD map
- Land Development Design Package
- CAD Overlay

EDUCATION (Degree, Year, Specialization)
Certificate, 1986, Computer Aided Drafting and Design

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
	YEARS OF OSR DESIGN EXPERIENCE:	YEARS OF OSR RELATED DESIGN EXPERIENCE:
Schroeder, Kevin S. Environmental Scientist	0	8

Brief Explanation of Responsibilities

As a Senior Environmental Scientist, Mr. Schroeder's responsibilities include leading and documenting field studies for various environmental reports as required under the National Environmental Policy Act, Section 404 of the Clean Water Act and FHWA requirements, in addition to local and state regulatory requirements. As an experienced wetland ecologist, Mr. Schroeder applies his aquatic biology background in wetland and stream studies. Mr. Schroeder is proficient in wetland identification, delineation, functional assessment, monitoring, permitting and remote sensing. He is emerging in the creation and restoration arena for both wetlands and streams. Mr. Schroeder has already applied Level I Rosgen Training - Applied Fluvial Geomorphology in Western Pennsylvania.

Proposed Mining Air Shaft and Access Road, Greene County, Pennsylvania. *Cyprus Cumberland Resources Corporation.* Task Leader. Performed wetland delineations and water quality analysis of the project area streams utilizing the EPA's Rapid Bio-assessment Protocols. Submitted necessary permits including state and federal wetland encroachment permits. Author of stream and wetland sections of the Bureau of Deep Mine Safety's Module 14.

Coal Conveyor Belt Right-of-Way, Beckley, West Virginia Area. *Norfolk Southern.* Environmental Specialist. While with another firm, performed wetland delineations and stream surveys for a five-mile coal conveyor belt right-of-way near Beckley, West Virginia, proposed by Norfolk Southern. Advised client on tower placement to minimize wetland impacts and high quality stream encroachments.

Wetland Mitigation Sites, Raccoon Creek Marsh and Taxiway E, Allegheny County, Pennsylvania. *Allegheny Department of Aviation.* Environmental Scientist. Monitored wetland mitigation sites as required by the PADER to evaluate the success of the replacement wetlands. Included with the Wetland Monitoring Report and WET functions and values analysis, and aquatic and wildlife species observation list. Suggested corrective action items for existing and potential problems regarding the success of the mitigation wetlands.

Natural Gas Pipeline Projects, Various Sites: Ohio, Pennsylvania, New York, Virginia and West Virginia. *Columbia Gas Transmission Corporation.* Environmental Specialist. While with another firm, performed wetland determinations for several natural gas pipeline projects. Filed FERC reports and applied for and was granted multiple Nationwide Permits - 12, 14, and 26, as well as state wetland and stream encroachment permits, hydrostatic test water discharge permits and land disturbance permits.

Surface and Groundwater Sampling, Shippingport, Pennsylvania. *Pennsylvania Power Company.* Environmental Specialist. While with another firm, assisted in collecting various surface and groundwater samples at the Bruce Mansfield Power Station. Field sampling included basic water quality measurements and laboratory preparation of samples.

Surface Water Sampling, West Elizabeth Pennsylvania. *Hercules Incorporated.* **Environmental Specialist.** While with another firm, collected surface water samples at various locations within the Hercules chemical plant as required by the NPDES Permit. Sampling included basic water quality measurements and laboratory preparation of samples.

EDUCATION (Degree, Year, Specialization)
B.S., 1986, Environmental Conservation

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
Society of Wetland Scientists	

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

Various computer software and equipment (surveying and mapping) used by Michael Baker Jr., Inc. for ongoing projects are as follows:

HYDROLOGY
SEDCAD4 – Storm Routing through Detention Structures, Channel Design and Riprap Sizing.
TR20 – Project Formulation – Hydrology by SCS
TR55 – Urban Hydrology for Small Watersheds by SCS
HAESTADS POND2 – Storm Routing through Detention Structures
HEC1 – Flood Hydrograph Package by U.S.A.C.O.E.
HAESTADS QTRSS – Urban Hydrology for Watersheds

HYDRAULICS – OPEN CHANNEL AND CULVERT
HEC RAS/ - river Analysis System/Flood Plain Analysis/Water Surface Profile
HEC2 – Water Surface Profiles by U.S.A.C.O.E.
HY8 – Culvert Analysis by FHWA
FLOWMASTER – Channel and Pipeline Hydraulics by HAESTAD, Inc.

PIPELINE HYDRAULICS
WATERCAD – Water Distribution System Modeling
KYPIPE2 – Water Distribution System Modeling
CYBERNET – Water Distribution System Modeling

GEOTECHNICAL
STABL5M – Slope Stability
REAME – Slope Stability
SAMM – Loads on Concrete Pipe

DRAFTING AND SITE DESIGN
AutoCAD – LANDDEVELOPMENT 2011 Desktop for Earthwork, Survey, Quantity, Calculations, Terrain Modeling, Coordinate Geometry, Site Grading, etc

SURVEYING AND MAPPING

SURVEY EQUIPMENT AND SOFTWARE
Survey/Global Positioning System (GPS)
Leica System 500 - SR 530 RTK - GPS Receiver
Leica GS50 C/A Code Receiver with Racal Correction Service
Trimble Pathfinder Pro XRS - with Omnistar Correction Service
Trimble 4000SSE - Dual Frequency Receivers
Trimble 4400 - RTK - Dual Frequency Receivers

Pipe/Cable Locators
Metrotech Model 9890
CAT & Jenny Locators
Metrotech Model 810

Total Stations
Topcon GTS 3B
Nikon DTM A5LG
Wild TC 2000

Total Stations with Onboard Data Collection
Leica TCRM 1103 – Motorized w/Reflectorless EDM
Leica TCA 1103 - Robotic w/Auto-Target Recognition (ATR)
High Precision Wild T3

Data Collectors
Wild GRE 4
PENTAX SC5
Leitz SDR33
Topcon FC1

Levels (Engineering)
Zeiss Ni 2
Leica NA 2002 Digital Level w/2 rods
Wild N-3
Zeiss Ni 1

Magnetic Locators
Chicago Steel Tape - FT - 60
Schoenstedt

Fathometer
1 – Innerspace Tech Model 456 – 200 KHz 8° Transducer

LiDAR
Aerial light detection and ranging digital terrain mapping service.

Survey Software
Leica Ski-Pro, Version 2.0
Leica GIS Data Pro Version 1.20
Innerspace Technology Version 6.0 Data Logging with Guidance
Leica Survey Office Version 1.33
Trimble GPSurvey Version 2.35
Trimble Pathfinder Office Version 2.11
Leica – Liscad 6.00
Wild Soft Version 1.65
MicroStation Version SE or J
Eagle Point Version 99Q3

PHOTOGRAMMETRIC EQUIPMENT AND SOFTWARE

First Order Stereoplotters
Wild Aviolyt BC2 Analytical Stereoplotter
Leica SD 2000 Analytical Stereoplotter (Jackson, Mississippi office)
Wild PUG-4 Point Transfer Devices

Softcopy Stereoplotters
Z/I ImageStation SSK, Xeon GXI 2000, 2-450 MHz (Mexico City, Mexico office)
Z/I ImageStation ZIII, Xeon GXI 2000, 2-450 MHz
Sun ULTRA 60 360 MHz Ultra Sparc with SOCET Set Suite of Software
Z/I ImageStation SSK, PIII Xeon, 2-1.0 GHz
Z/I ImageStation SSK, Intel® Xeon™ Processor, 1.80GHz, 512K Cache

Digital Orthophoto
Dell PIII Xeon, 2-1.0 GHz
Intergraph TDZ425
Intergraph 6887 ImageStation (Stereo Softcopy Capability)

Scanner
Z/I PhotoScan-TD (TDZ 310) Resolution setting of: 7, 14, 21, 28, 56, 112 and 224 microns

DVD Writer
Pioneer - Model #DVR-S201-DVD-R Drive with Pioneer Crosswriter Version 2.0 and Prassi DVD REP Version 2.0 Software

CD Writer
Hewlett Packard HP Sure Store CD Writer 6020es
Software: Easy CD Pro 95 Version 1.0 and Easy CD Pro Win 3.1 Version 3.0

Server
Compaq Proliant 5500

Pentium II Processor Xeon 400 MHz
1.7 GB Memory
106 GB Disc Storage

External 40/80 Compaq DLT Drives

1.2 Terrabyte Network Attached Storage

Software
BINGO – AERIAL, version 4.0
MrSID, version 1.3

j f k RABATS/BRATS, June 1997
ABC32, version 1.3
IRAS – C, version 8.0
Adobe Photo Shop 5, version 5.05
CADDMAPP/DGN, version 5.8.3
ERDAS Imagine, version 8.5
ImageStation Digital Mensuration-ISDM, version 4.0
ImageStation Base Rectifier-ISBR, version 4.0
ImageStation DTM Collection-ISDC, version 3.2
ZI Ortho Pro/Geo Media, version 3.1 MicroStation – J & SE versions

EDIT/DIGITIZING EQUIPMENT AND SOFTWARE
Workstations – Windows NT or Windows 2000
Pentium 4, 2 GHz
Pentium 2, 333 MHz
Pentium 2, 300 MHz
Pentium 2, 266 MHz
TDZ425
TD260MT

Scanners
ANA Tech Eagle 4050 – 500 dpi scanner
Hewlett Packard ScanJet 5100C

Plotters
JDL 3000 E
JDL 3500 E
Hewlett Packard 1055 CM
Hewlett Packard Design Jet 2500 CP-600 dpi

GIS Software
Intergraph – MGE/MGA, version 8 suite of products
MRF Mapping Tool Kit, version 8.0
ESRI: ARC/Info, version 8
ArcView, version 3.2
Arc View, version 3.1
AutoCAD, version 2000i
Oracle
Visual Basic, version 6
Visual Basic, version .NET

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
Collier Sportsman's Club Highwall Brooke County, West Virginia	West Virginia Department of Environmental Protection (WVDEP) Office of Abandoned Mine Lands & Reclamation 601 57th Street, SE Charleston, WV 25304	Responsible for drilling by sub-consultants, perform research of geological data and mining maps, review of water quality data, preparation of WV Stormwater and WVDOH permits. Prepared construction plans and specifications for the project which included erosion and sedimentation control measures, site clearing, grubbing and grading, wet mine seals, one bate gate, HDPE culverts, diversion and collection channels, soil cover placement, temporary mine water treatment, and revegetation.	$139,821 (Fee) $2,500,000 (Construction)	20%
Simpson Highwall Project, Barbour County, West Virginia	West Virginia Department of Environmental Protection (WVDEP) Office of Abandoned Mine Lands & Reclamation 601 57th Street, SE Charleston, WV 25304	Responsible for drilling by sub-consultants, performed research of geological data and mining maps, review of water quality data, preparation of WV Stormwater, USACE, and WVDOH permits. Prepared construction plans and specifications for the project which included erosion and sedimentation control measures, site grading, mine seals, HDPE culverts, a WVDOH box culvert crossing SR 76, grouted rip rap collection channels, soil cover placement, and revegetation.	$119,000 (Fee) $750,000 (Construction)	99%
Emerald Refuse Area No. 3 Waynesburg, Pennsylvania	Emerald Coal Resources, LP 158 Portal Road, PO Box 1020 Waynesburg, Pa 15370	Prepare permit submission and construction plans for a coal refuse disposal site and slurry impoundment including E&S control, diversion and collection ditches, spillways, staging, and stability analyses.	$778,279 (Fee)	98%
Development of a Long-Term Control Plan for Combined Sewer Overflow Abatement Pittsburgh, PA	City of Pittsburgh Department of Engineering and Construction Pittsburgh Water and Sewer Authority Pittsburgh, PA 15219	Historical Data Review, GIS Based Sewer System Mapping, GPS Mapping, CCTV Inspection, Flow Metering Installation, Water Quality Monitoring, Agency Coordination, and Public Involvement	$7,500,000 (Fee)	98%

National Pipeline Mapping System GIS Database Repository Services and Digital Data and Map Distribution Nationwide	U.S. Department of Transportation's Research and Special Programs Administration and Office of Pipeline Safety, Washington, D.C.	Baker is maintaining the national geospatial data repository for the National Pipeline Mapping System (NPMS)	$4,116,808 (Fee)	75%
General Environmental Consulting Services and Technical Support Contract Various Sites in Pennsylvania	Pennsylvania Department of Environmental Resources Harrisburg, Pennsylvania	Services include risk assessments, site investigations, remedial feasibility studies, remedial action design, construction inspection, Health & Safety, storage tank management, and industrial hygiene services	$12,000,000 (Fee)	90%
Design & Construction Management Services for the Coney Island Water Pollution Control Plant Upgrade	City of New York Dept. of Environmental Protection Elmhurst, New York	Baker, in joint venture with another firm, has been providing design, construction management and resident engineering services on a continuous basis since 1979 to upgrade the Coney Island Water Pollution Control Plant. The plant services an area of more than 22 square miles with a population of 690,500 and treats primarily domestic wastewater with some industrial and commercial wastes.	30,607,141 (Fee)	97%
TOTAL NUMBER OF PROJECTS: 7		**TOTAL ESTIMATED CONSTRUCTION COSTS:** **$55,260,049 (FEE)**		

16. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS SERVING AS A SUB-CONSULTANT TO OTHERS					
PROJECT NAME, TYPE AND LOCATION	NATURE OF FIRMS RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONSTRUCTION COST	
				ENTIRE PROJECT	YOUR FIRM'S RESPONSIBILITY
None					

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)**
Davidson Highwall Project, Preston County, West Virginia	West Virginia Department of Environmental Protection (WVDEP) Office of Abandoned Mine Lands & Reclamation 601 57th Street, SE Charleston, WV 25304	$107,000 (Fee)	2010	Yes
Wymer Portals Project, Preston County, West Virginia	West Virginia Department of Environmental Protection (WVDEP) Office of Abandoned Mine Lands & Reclamation 601 57th Street, SE Charleston, WV 25304	$123,000 (Fee)	2010	Yes
Fort Gordon Mine Closure Sites, Fort Gordon, Augusta, Georgia	USACE, New Orleans District P.O. Box 60267 New Orleans, LA 70160-0267	$110,000 (Fee)	2009	Yes
9 County Roads, **Waterline Feasibility Study** Preston County, WV	West Virginia Department of Environmental Protection Office of Abandoned Mine Lands & Reclamation 601 57th Street, SE Charleston, WV 25304	$46,361 (Fee)	2009	NA (Study)
Chalk Mountain Mine Permit Renewal and Pit Mine Modification/Expansion, Spruce Pine, North Carolina	The Feldspar Corporation 530 Altapass Road Spruce Pine, North Carolina 28777	$46,000 (Fee)	2008	Yes
Mine Dump Site Number Four Spruce Pine, North Carolina	The Feldspar Corporation 530 Altapass Road Spruce Pine, North Carolina 28777	$75,000 (Fee)	2008	Yes
Miller Mountain **Waterline Feasibility Study** Preston County, WV	West Virginia Department of Environmental Protection Office of Abandoned Mine Lands & Reclamation 601 57th Street, SE Charleston, WV 25304	$46,361 (Fee)	2008	NA (Study)
Borgman Refuse & Portals – AML Reclamation Preston County, WV	West Virginia Department of Environmental Protection Office of Abandoned Mine Lands & Reclamation 601 57th Street, SE Charleston, WV 25304	$107,500 (Fee)	2007	Yes

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)**
Kempton Refuse and AMD Tucker County, WV	West Virginia Department of Environmental Protection Office of Abandoned Mine Lands & Reclamation 601 57th Street, SE Charleston, WV 25304	$213,384 (Fee)	2007	Yes

18. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS BEEN A SUB-CONSULTANT TO OTHER FIRMS (INDICATE PHASE OF WORK FOR WHICH YOUR FIRM WAS RESPONSIBLE)					
PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST OF YOUR FIRM'S PORTION	YEAR	CONSTRUCTED (YES OR NO)	FIRM ASSOCIATED WITH
Powell River Ecosystem Restoration-Ely and Puckett Creek-Site 1, 3, and 4 Additions Lee County, Virginia	US Army Corps of Engineers, Nashville District	$49,500 (Fee)	2007	Constructed	David Miller & Associates Vienna, Virginia
General Investigation Feasibility Study, Powell River Basin Lee County, Virginia	US Army Corps of Engineers, Nashville District	$79,071 (Fee)	2011	N/A (Study)	David Miller & Associates Vienna, Virginia

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.

Michael Baker Jr., Inc. (Baker) has been providing abandoned mine lands (AML) reclamation and acid mine drainage (AMD) remediation since the federal government first enacted legislation. Our work experience in AML/AMD started with Operation Scarlift in the 1970's, and since 1983, we have been providing our engineering services in these areas to the West Virginia Department of Environmental Protection (WVDEP), Pennsylvania Department of Environmental Protection (PADEP), Ohio Department of Natural Resources (ODNR), and U.S. Office of Surface Mining (OSM), to name a few. Our recent experience on numerous AML reclamation and AMD remediation projects for the WVDEP, ODNR, PADEP and Nashville District of the U.S. Army Corps of Engineers, illustrates our track record for the completion of assignments on time and within budget.

Although the projects presented in the Project Experience Matrix of Attachment "C" of the Consultant Confidential Qualification Questionnaire (CCQQ) clearly show Baker's AML/AMD design, water system design, and related experience, they only hint at the extensive human and material resources which especially qualify our firm for this project. The following narrative further describes our experience and provides insight into the special capabilities of Baker.

Comprehensive Services

The civil, mining, surveying, mapping, environmental, and geotechnical services of Michael Baker Jr., Inc. are available to immediately respond to the needs of WVDEP. Working from our Beaver, Pennsylvania office, which provides excellent highway and airline transportation, Baker can provide the full spectrum of services needed in water distribution system design as well as mine reclamation and mine drainage abatement operations. Some of the more important services our firm can provide to WVDEP include:

- Mapping and Aerial Photography
- Surveying
- Environmental Evaluations and Assessments
- Data Acquisitioned Interpretation
- Geotechnical Engineering
- Engineering Design
- Plan/Specifications Preparation
- Construction Management

Since we can furnish all of the engineering related services required for abandoned mine lands reclamation projects, we can work very efficiently and meet the strictest of schedules. Our efficiency is further heightened by the use of mapping systems and AutoCAD compatible design software to perform computer-assisted mapping, design and drafting.

Baker's aerial light detection and ranging (LiDAR) service provides an efficient and affordable high-definition solution to digital terrain model surface creation and planimetric feature collection. Baker owns and operates the latest in aerial LiDAR and positioning technology for outstanding productivity and survey efficiency. From a single aerial collection session, our aerial LiDAR system offers the ability to accurately capture and classify features that are important to you and the requirements of your project. With up to four range measurements, including first, second, third, and last return-point capture, you can be assured that all project data is accurately captured and available for classification

Baker LiDAR provides the ability to accurately and effectively capture point-cloud terrain data for orthophoto rectification and planimetric or topographic map compilation. Products can be delivered as bare-earth DEM files, with the option of upgrading to digital terrain models for contour generation.

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.

Some of the functions applicable to design projects for which Baker routinely employs the LiDAR System and AutoCAD LAND DEVELOPMENT Desktop include:

- Contour Mapping of the Surface And Subsurface
- Facilities Layout and Site Design
- Earthwork Volume Computations and Cost Estimates
- Drafting of Plans Profiles and Cross Sections

The LiDAR System and AutoCAD LAND DEVELOP-MENT Desktop Civil Design software are powerful cost saving tools for abandoned mine land projects since they can evaluate numerous configurations rapidly. They are especially useful for projects requiring extensive waterline plan and profile drawings and can interface with hydraulic models such as WaterCAD for analysis and design. They are also useful for projects requiring extensive backfilling and grading, such as may be required for water tank and pump station sites, and for the grading of refuse banks and gob piles, elimination of highwalls, and reclamation of other abandoned surface disturbances.

The experience of the key project personnel includes abandoned and active mine operations. Since we continually serve many of the country's largest coal and mineral producers as well as industrial clients and state environmental agencies, several personnel listed under Item 13 of the CCQQ also have experience in all phases of mining services, from survey, mapping, exploration and reserve analysis through mine planning, permitting, design, construction management, and final closure and reclamation. Since mining and reclamation projects (and WVDEP assignments in particular) comprise a large segment of our business, we work to assure that the mining services provided meet the needs and expectations of our clients and any regulatory agencies involved. Some of the many coal producers we have served are listed below:

- Consolidation Coal Company
- U.S. Steel Mining Co., Inc.
- Westmoreland Coal Company
- Emerald Coal Resources LP
- Cumberland Coal Resources LP
- Exxon Research and Engineering Company

To further demonstrate Baker's full service capabilities and experience, a recent AML project description is provided as follows:

- ***State Funded Mine Reclamation and Pollution Abatement Projects – Kempton Refuse & AMD, West Virginia***

Michael Baker Jr., Inc. was retained by the West Virginia Department of Environmental Protection to prepare detailed design plans, and technical specifications for the Kempton Refuse & AMD project in Tucker County. The constructed project won a reclamation award and is described in a video on the WVDEP website.

The primary purpose of the Kempton Refuse & AMD project is to reclaim the remains of the pre-law underground and surface mines in the project area and divert AMD through a passive treatment system before discharging to existing streams in order to rehabilitate the watershed, and in turn the North Branch of the Potomac River.

The project involved the reclamation of over 60 acres of exposed refuse and mine spoil, re-establishment of 4,400 LF of stream, and conveyance and treatment of numerous AMD discharges. Site reconnaissance was performed to identify mine seepage points and AMD sources, subsidence features, and potential soil borrow areas. A wetland delineation and stream assessment were performed to determine design parameters and mitigation requirements for regulatory compliance. A series of bore holes were drilled to

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.

determine underground conditions including characteristics of refuse, soil, and rock, and to determine the elevation of critical mine entries.

Plans and specifications were prepared for the reestablishment of the unnamed tributary, grading of spoil and refuse to provide positive drainage, collection of acidic seepage, sealing of mine entries, AMD conveyance and treatment, and soil covering and revegetation of refuse materials.

Specifications for revegetation and reforestation of selected areas included soil amendments, seed mixtures, tree plantings, and mulching. Stream restoration designs required to reconstruct two unnamed tributaries in the Potomac watershed employed natural design techniques including a serpentine layout with pools and riffles.

The site included numerous mine seals and collection points to abate the AMD seepage. Mine seals consisting of clay seals, aggregate material, and PVC outlet pipes were proposed, with modified entries required to meet site specific artesian conditions. Conveyance pipes and limestone lined conveyance channels were provided to transfer AMD to a treatment system consisting of an equalization pond, successive alkalinity producing system (SAPS pond), and aerobic wetland. Project construction was completed in 2009.

Summary

As a large, diverse engineering firm, Baker has facilities available to properly conduct water distribution extension, abandoned mine land reclamation, and AMD remediation projects. The use of in-house facilities can speed project completion and facilitate tracking of progress. The in-house facilities include:

- Data Processing
- Interactive Graphics and AutoCAD
- Word Processing
- Printing and Reproduction

Baker's qualifications to provide engineering services for waterline and abandoned mine land projects, we offer the following response to the evaluation factors:

1. **Bidder Experience** in all aspects of surveying and mapping, subsurface investigation, and design engineering.

   - Extensive experience in each area. Items 17 and 18 of the CCQQ describe various projects for which we provided these services during the last five years. Projects listed under item 12 of the CCQQ describes typical of various projects for which we provided our services to WVDEP.

   - Strong capabilities in each area. Item 13 of the CCQQ lists our personnel by discipline. Our large multi-disciplinary staff is experienced in all aspects of water distribution and AML reclamation; civil, environmental, mining, geotechnical and reclamation engineering applied to surface and underground coal mining; land restoration; stream and water restoration; and land use and natural resources planning. The attached "Project Experience Matrix" show various projects performed for various clients and also show primary participants responsible for these projects.

2. **Qualification of Personnel** with respect to background, general experience, and experience relative to the requirements of the project.

   - Baker's key personnel are registered professional engineers experienced in a broad variety of water distribution and similar projects, as indicated item 13 of the CCQQ.

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.

- Our Project Manager and Project Engineers are veterans of many similar projects including past WVDEP projects.

3. **Corporate Specialized Experience and Demonstrated Abilities**

- Baker's specialized experience with AML related problems is summarized in the AML and Related Projects Matrix in Appendix C. Our work has addressed the full spectrum of AML problems including water projects for clients such as WVDEP, PADEP and others.

- The firm has a wealth of experience on similar projects, as evidenced by projects performed for mining and mineral companies. Moreover, Baker's transportation, site development, and water resource projects in the tri-state area often address AML problems.

20. THE FOREGOING IS A STATEMENT OF FACTS

Signature: William D. Trimbath **Title:** Vice President **Date:** June 26, 2012

Printed Name: William D. Trimbath, P.E.

RFQ No. DEP15901

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

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

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities, "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

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

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

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: Michael Baker Jr., Inc.

Authorized Signature: Willis D. Trimbath Date: June 26, 2012

State of Pennsylvania

County of Beaver, To-wit:

Taken, subscribed, and sworn to before me this 26 day of June, 2012

My Commission expires August 1, 2012

AFFIX SEAL HERE NOTARY PUBLIC Linda L Montagna

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Linda L. Montagna, Notary Public
Brighton Twp., Beaver County
My Commission Expires Aug. 1, 2012
Member, Pennsylvania Association of Notaries