

WEST VIRGINIA

DEPARTMENT OF ENVIRONMENTAL PROTECTION



west virginia department of environmental protection

Witcher Creek Portals & Refuse Design

DEP 15601

March 2012

*Expression of
Interest*

RECEIVED
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PLANNING DIVISION
STATE OF WV

**CDM
Smith**

in association with

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services



503 Martindale Street, Suite 500
Pittsburgh, Pennsylvania 15212
tel: 412 201-5500
fax: 412 231-0301

March 15, 2012

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

Subject: Expression of Interest
Professional Engineering Design and Construction Monitoring Services
Witcher Creek Portals and Refuse Project
DEP15601

Dear AML Chief and Selection Committee:

CDM Smith Inc. (CDM Smith) is pleased to express our interest in providing professional engineering design services and construction monitoring services for the Witcher Creek Portals and Refuse Project in Kanawha County, West Virginia. CDM Smith will provide high quality service.

CDM Smith is a worldwide, full-service consulting, engineering, construction and operations firm helping public and private clients improve the environment and infrastructure. Our Charleston, WV office includes professional design and construction monitoring staff who have successfully completed similar engineering projects throughout West Virginia for more than 15 years. For this opportunity, we propose to collaborate with Herbert Roland & Grubic (HRG). HRG provides full service capabilities to public and private clients in the design of civil infrastructure related to stormwater and watershed management, water and wastewater treatment systems, roadways, bridges and site development.

Our proposed project manager is Mr. Dan DePra. Dan is a West Virginia registered Professional Engineer with 18 years of civil, environmental and project management experience. Dan resides in our Pittsburgh, PA office but recently successfully served as the project manager for the Comprehensive Planning Study for Water, Wastewater and Stormwater Project for the West Virginia Water Development Authority and the Infrastructure and Jobs Development Council. Dan will be assisted by Mr. George J. (Joe) Crittenden. Joe resides in our Charleston, WV office and brings more than 35 years of civil and site design experience, including 10 years of experience with the AML program. Our project management team will be responsible for





AML Chief and Selection Committee

March 15, 2012

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delivering design team resources and quality deliverables that meet or exceed our approved budgets and schedules.

The CDM Smith Team offers the WVDEP AML program the following:

- Five West Virginia registered Professional Engineers in our Primary Office located in Charleston, WV. Six additional West Virginia registered Professional Engineers, as identified on our project organization diagram (located in Section 4) exist in our team's Morgantown, WV and Pittsburgh, PA offices.
- Reclamation engineering design experience within our WV RPE's Primary Office including Joe Crittenden and Tony Kitzmiller. These individuals may be supported by five additional staff identified on our project organization diagram (located in Section 4) with significant reclamation engineering design experience.
- Four WV-AML Design Teams within our Primary Office and six WV-AML Design Teams within our Morgantown, WV and Pittsburgh, PA offices. Our AML and Related Project Experience Matrix (located in Section 3) identifies a variety of additional support personnel directly relevant to the services you are requesting.

We are very excited about the opportunity to assist the WVDEP AML Program and we would appreciate your consideration to be short listed to further discuss the value our team can bring to your efforts.

Very truly yours,

A handwritten signature in dark ink, appearing to read "Matthew R. Sickles".

Matthew R. Sickles, P.E.
Vice President
CDM Smith Inc.

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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
 DEP 15601

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

RFQ COPY
 TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

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

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
01/26/2012				

BID OPENING DATE: 03/15/2012 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		906-29		
<p>WITCHER CREEK PORTALS & REFUSE DESIGN</p> <p>EXPRESSION OF INTEREST</p> <p>THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, IS SOLICITING EXPRESSIONS OF INTEREST FOR PROFESSIONAL ENGINEERING DESIGN SERVICES AND CONSTRUCTION MONITORING SERVICES AT THE WITCHER CREEK PORTALS & REFUSE PROJECT IN KANAWHA COUNTY, WEST VIRGINIA PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS.</p> <p>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.</p> <p>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.</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Matt R. Allen</i>	TELEPHONE 412-201-5500	DATE 03.14.2012
TITLE Vice President	FEIN 04-2473650	ADDRESS CHANGES TO BE NOTED ABOVE

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

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

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

DEFINITIONS:

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

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

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

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

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: Matthew R. Sickles

Authorized Signature: Matt R Sickles Date: 3/14/12

State of Pennsylvania

County of Allegheny, to-wit:

Taken, subscribed, and sworn to before me this 14th day of March, 2012.

My Commission expires February 28, 2013.

AFFIX SEAL HERE

COMMONWEALTH OF PENNSYLVANIA

Notarial Seal
Lynne A. Nestler, Notary Public
City of Pittsburgh, Allegheny County
My Commission Expires Feb. 28, 2013
Member, Pennsylvania Association of Notaries

NOTARY PUBLIC

Lynne A. Nestler

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

PROJECT NAME Witcher Creek Portals & Refuse Design	DATE (DAY, MONTH, YEAR) 15 March 2012	FEIN 04-247 3650	
1. FIRM NAME CDM Smith Inc.	2. HOME OFFICE BUSINESS ADDRESS 2740 Smallman Street, Suite 100 Pittsburgh, PA 15222	3. FORMER FIRM NAME NA	
1. HOME OFFICE TELEPHONE 412-201-5500	2. ESTABLISHED (YEAR) 1947	6. TYPE OWNERSHIP Corporation	6a. WV REGISTERED DBE (Disadvantaged Business Enterprise) YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
7. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE Geary Plaza, Suite 210, 700 Washington Street, East, Charleston, WV 25301 / Phone: 304-345-2339 / Matthew R. Sickles, P.E., Vice President			
Charleston: 2 AML design personnel Pittsburgh: 2 AML design personnel Other: 3 AML design personnel			
8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM Richard Fox, Chairman and CEO John Manning, President and Chief Operating Officer Paul Brown, Executive Vice President Paul Camell, Executive Vice President		8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS Matthew Sickles, Vice President, 412-201-5500 Jason Venier, Associate, 412-201-5500	
9. PERSONNEL BY DISCIPLINE			
<u>109</u> ADMINISTRATIVE <u>32</u> ARCHITECTS <u>248</u> CADD OPERATORS <u>40</u> CHEMICAL ENGINEERS <u>982</u> CIVIL ENGINEERS <u> </u> DRAFTSMEN <u>361</u> CONSTRUCTION INSPECTORS <u>159</u> DESIGNERS, HIGHWAY <u> </u> ENGINEERING TECHNICIANS	<u>15</u> ECOLOGISTS <u>14</u> ECONOMISTS <u>168</u> ELECTRICAL ENGINEERS <u>362</u> ENVIRONMENTALISTS <u>62</u> ESTIMATORS <u>122</u> GEOLOGISTS <u> </u> HISTORIANS <u>300</u> HYDROLOGISTS	<u>11</u> LANDSCAPE ARCHITECTS <u>66</u> MECHANICAL ENGINEERS <u> </u> MINING ENGINEERS <u> </u> PHOTOGRAMMETRISTS <u>311</u> PLANNERS: URBAN/REGIONAL <u>200</u> SANITARY ENGINEERS <u>6</u> SOILS ENGINEERS <u>20</u> SPECIFICATION WRITERS	<u>112</u> STRUCTURAL ENGINEERS <u>50</u> SURVEYORS <u>159</u> TRAFFIC ENGINEERS <u>159</u> TRANSPORTATION <u> </u> ENGINEERS <u>5</u> AIRPORT PLANNERS <u>25</u> GRAPHIC DESIGNERS <u>94</u> GIS PERSONNEL <u> </u> MASS TRANSIT SPECIALISTS <u>200</u> OTHER <u>4074</u> TOTAL PERSONNEL

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 5

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

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

1.1. OUTSIDE KEY CONSULTANTS/SUB-CONSULTANTS ANTICIPATED TO BE USED. ATTACH "AWL CONSULTANT QUALIFICATION Questionnaire".

<p>NAME AND ADDRESS: Herbert, Rowland & Grubic, Inc. 240 Scott Avenue, Suite 1 Morgantown, WV 26508</p>	<p>SPECIALTY: Hydrologic/Hydraulic Design/Evaluation; Construction Inspection/Management; Water Treatment; Stream Restoration; Geotechnical/Stability</p>	<p>WORKED WITH BEFORE <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No</p>

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

YES Description and Number of Projects: 4

- o Argo Tunnel Active Treatment System Construction and Startup, Idaho Springs and Central City, Colorado (1998)
- o CERCLA Remedial Actions, California Gulch Superfund Site, Leadville, Colorado (2001)
- o Town of Basin, MT (Karen Taylor, Denver)
- o Leadville, Colorado (Steve Fundingsland, Denver)

B. Are your firm's personnel experienced in Soil Analysis?

YES Description and Number of Projects: 100+

CDM offers comprehensive consulting, engineering and construction support services for all aspects of geotechnical engineering. Our geotechnical team provides investigation and laboratory services, analysis, design reports, recommendations and construction management services for projects including commercial and industrial buildings, dams, wastewater and water treatment plants, pipelines, dredging, landfills, and hazardous remediation projects. Our expert staff offer a wide range of design capabilities, including slopes and embankments, excavation and filling, dewatering, blasting and rock removal, temporary and permanent retaining walls, deep and shallow foundations, and on-grade slabs.

CDM has experience in the inspection and rehabilitation of existing dams as well as the design and construction of new dams, including earth embankment, roller compacted concrete (RCC) and conventional concrete dams. Rehabilitation measures designed by CDM engineers have included adding RCC and other types of overtopping protection, raising dam height, modifying existing spillway capacity, and addressing seepage and slope stability concerns.

CDM has extensive experience in mining and the design and construction of tunnels involving traditional soft ground tunneling techniques, rock tunneling, pipe jacking, micro tunneling, directional drilling and ground freezing. Our experience includes underground mining, water supply and wastewater pipeline crossings of highways, railroads and waterways; pedestrian tunnels, highway, railroad and subway tunnels; and water intake structures.

CDM has provided geo-environmental engineering services on a wide variety of projects. Our experience includes design of containment slurry walls, solidification/stabilization of contaminated soils, underwater capping, zero-valent iron reactive walls and groundwater interceptor trenches, including trenches constructed using polymer slurry methods. Additional services include waste landfill design and construction, landfill closure and cap design, groundwater control and design and construction of remediation systems, treatment lagoons, solids dewatering, and waste impoundments

CDM maintains full-service geotechnical testing laboratories that support geotechnical and geo-environmental projects and provide stand-alone services to our clients. These laboratories perform the full range of geotechnical tests, including geosynthetic seam strength testing and bench-scale testing for slurry walls, soil stabilization and soil/chemical fixation and stabilization. In addition, CDM can mobilize temporary field laboratories for projects as warranted and provide specialty geotechnical field services, including load tests and instrumentation. Laboratory testing services provided include grain size analysis, moisture-density relationship (Proctor), tri-axial shear, direct shear, plasticity, permeability, consolidation, and compressive strength.

5. Are your firm's personnel experienced in hydrology and hydraulics?

YES Description and Number of Projects: 100+

- North Fork Indian Run Bank Stabilization at Brand Road, Dublin, Ohio
- Ault Park Stream Restoration, Cincinnati, Ohio
- Jacks Run Stream Restoration, Pittsburgh, Pennsylvania
- Hydrogeological Assessment of Sunday Mines Group, Colorado
- Hydrogeological Assessment of La Sal Mine Complex, Utah
- Nine Mile Run Habitat Restoration Project, Pittsburgh, Pennsylvania
- Rouge River Watershed Wet Weather Management Demonstration Program, including Streambank Restoration/Stabilization, Wayne County, Michigan
- Anaconda Smelter Superfund Site Reclamation, Anaconda, Montana
- Flood Hazard Mitigation and Bank Stabilization Study, Mecklenburg County, North Carolina
- Midvale Slag Superfund Site, Salt Lake City, Utah
- Streambank Stabilization and Channel Restoration, Libby Asbestos CERCLA site, Libby, MT
- Streambank Stabilization and Channel Restoration, Jack Waite mine, Idaho
- Streambank Stabilization and Channel Restoration, CR Kendall Mine, Lewistown, MT
- Streambank Stabilization, 10 Mile Creek Mine, Helena, MT
- Geomorphic investigation of Warm Springs Creek and Silver Bow Creek, Anaconda Butte CERCLA sites
- Stormwater characterization on Butte Hill, Anaconda Butte CERCLA site
- Channel restoration design on the Clark Fork, Montana

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

NO

E. Are your firm's personnel experienced in domestic waterline design? (Include any experience in evaluation of aquifer degradation as a result of mining.)

YES Description and Number of Projects: 100+

- CR Kendall Mine Closure, in Lewistown, Montana
- Basin Creek project, Montana
- Dublin Manor Waterline Design, Dublin, Ohio
- Waterline and Sewer Preliminary Design, Dublin, Ohio
- Walker, Williams and Wakefield Water Line Replacement, Loveland, Ohio
- Oak, Cedar, Ruth and Robin Water Line Replacement, Loveland, Ohio
- Hilliard Road Water Main Rehabilitation, Lakewood, Ohio
- Warren County Water Main Design, Warren County, Ohio
- Waterline Preliminary Design, Dublin, Ohio
- Water Storage, Transmission, Distribution Facilities Design, Permitting, Bidding and Construction Services, City of Florence, Boone County, Kentucky, and Cincinnati, Ohio
- Water Main Design, Mt. Vernon, Ohio
- Water and Sewer Main Design, Dublin, Ohio
- Preliminary Waterline Extension Design Springfield, Ohio
- Preliminary Waterline Extension Design, Port Columbus International Airport, Ohio

YES

Description and Number of Projects: 30

- Barrick Gold Golden Sunlight Mine Passive Treatment Evaluation
- USEPA Jack Waite Mine Passive Treatment Evaluation, Wallace, Idaho
- ASARCO January Adit Passive Treatment Evaluation, Tucson, Arizona
- ASARCO Gem Portal Passive Treatment Evaluation, Wallace, Idaho
- Beaverhead Conservation District, Nitrate Treatment Wetlands, Dillon, Montana
- USEPA Lee Mountain Adit, Rimini, Montana
- CR Kendall Mine EIS, Hilger, Montana
- Minera Yanacocha (Newmont) Passive Treatment Evaluation, Cajamarca, Peru
- Opportunity Ponds Passive Treatment System, Anaconda, Montana
- Basin Creek Mines Inc. Passive Treatment Evaluation, Basin, Montana
- Butte Lower Area One, Butte, Montana
- Butte Metro Storm Drain, Butte, Montana
- Noranda Minerals Passive Treatment Evaluation, Grey Eagle Mines, Happy Camp, California
- Colorado Department of Health, Burleigh Tunnel Passive Treatment System
- Big Five Tunnel, Idaho Springs, Colorado
- Gilt Edge Mine Superfund Site, South Dakota
- Mike Horse Mine, Montana, Water Treatment Plant Design Build
- Summitville Mine Superfund Site, Water Treatment Plant, major renovations, operations and maintenance
- Big Five Mine, Creek/Central City, Colorado
- Burleigh Mine, Colorado
- Basin, Montana
- Upper Tenmile, Montana
- In situ Pit Lake Treatment, Gilt Edge Mine, South Dakota
- Feasibility Study for Passive Treatment of Mine Drainage, Northern California
- Wastewater Evaluation, Stormwater Evaluation, and Process Design Modifications, Including Operations and Maintenance, Copperhill, Tennessee
- Mine Effluent Treatment Systems Evaluation, West/Central Florida
- Argo Tunnel Remedial Design Idaho Springs, Colorado
- Remedial Design, Upper Tenmile Creek Mining Area Superfund Site, Lewis and Clark County, Montana

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

NAME & TITLE (Last, First, Middle Int.) DePra, Daniel J., P.E., BCEE Project Manager	YEARS OF EXPERIENCE YEARS OF AML RELATED DESIGN EXPERIENCE: 18		YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
	YEARS OF AML DESIGN EXPERIENCE: 18		

Brief Explanation of Responsibilities
 Dan will serve as project manager, overseeing project quality, schedule and adherence to budget.

EDUCATION (Degree, Year, Specialization)
 M.S., 2004, Civil Engineering, University of Pittsburgh
 B.S., 1993, Mechanical Engineering, University of Pittsburgh
 B.S., 1993, Chemistry, University of Pittsburgh

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS
 Member, American Academy of Environmental Engineers
 Member, Engineers Society of Western Pennsylvania

REGISTRATION (Type, Year, State)
 Professional Engineer, 1999, Pennsylvania and Ohio

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

NAME & TITLE (Last, First, Middle Int.) Crittenden, George (Joe) Deputy Project Manager	YEARS OF EXPERIENCE YEARS OF AML RELATED DESIGN EXPERIENCE: 12		YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 5
	YEARS OF AML DESIGN EXPERIENCE: 12		

Brief Explanation of Responsibilities
 Joe will assist Dan DePra with project oversight activities.

EDUCATION (Degree, Year, Specialization)
 Drainage Workshop, WVDOT/2005
 PSMJ Marketing Workshop/2005
 PSMJ Project Manager's Boot Camp/2004
 Sediment Control Design, WVDOT/2004
 Right of Way Plan Development/2001, 2002 and 2003
 Development of Signing, Marking and Maintenance of Traffic Plans, WVDOT/2001

Flood and Erosion Control, Maccaferri, Inc./2001
 Advanced HEC-RAS KSPE Training/2000
 CAD Productivity & InXpress Workshop/1996
 FHWA Drainage Design Workshop/1979

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS
 National Institute for Certification in Engineering Technologies (NICET), 1993

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

<p>NAME & TITLE (Last, First, Middle Int.) Sickles, Matthew R., P.E. Officer-in-Charge</p>	<p>YEARS OF AML DESIGN EXPERIENCE: 22</p>	<p>YEARS OF AML RELATED DESIGN EXPERIENCE: 22</p>	<p>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0</p>
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Brief Explanation of Responsibilities
Matt's responsibilities are to deliver appropriate resources to meet project goals and provide top client services to WV DEP.

EDUCATION (Degree, Year, Specialization)
B.S., 1989, Environmental Engineering, The Pennsylvania State University

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS
Member, American Academy of Environmental Engineers
Member, Engineer's Society of Western Pennsylvania
Member, American Association of Airport Executives
Member, Pittsburgh Airport Area Chamber of Commerce
Member, Pittsburgh Downtown Partnership
Member, Water Environment Foundation
Member, Aviation Council of Pennsylvania
Member, Pennsylvania Water Environment Association
Member, Southwestern Pennsylvania Engineering Outreach

REGISTRATION (Type, Year, State)
Professional Engineer, 1995, Pennsylvania

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

<p>NAME & TITLE (Last, First, Middle Int.) Gormley, John, Ph.D., P.E. Quality Assurance/Quality Control</p>	<p>YEARS OF AML DESIGN EXPERIENCE: 42</p>	<p>YEARS OF AML RELATED DESIGN EXPERIENCE: 42</p>	<p>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0</p>
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Brief Explanation of Responsibilities
John will review project work to verify that the most cost-effective, quality design is provided to WV DEP.

EDUCATION (Degree, Year, Specialization)
Ph.D., 1971, Civil Engineering, Carnegie Mellon University
M.S., 1964, Civil Engineering, Carnegie Mellon University
B.S., 1962, Civil Engineering, Carnegie Institute of Technology

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS
Professional Engineer, 1971, Pennsylvania, Colorado, Wyoming, West Virginia, Virginia, Maryland and Maine
MSHA Self Rescuer and Underground Safety, 1980
OSHA 40-hour Hazardous Material health & Safety Training Program, 1986

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)			
NAME & TITLE (Last, First, Middle Int.) Nelson, Mark R., P.G. Mine Reclamation	YEARS OF EXPERIENCE: 20	YEARS OF AML RELATED DESIGN EXPERIENCE: 24	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
	Brief Explanation of Responsibilities		
EDUCATION (Degree, Year, Specialization) M.S., 2000, Geology and Geological Engineering, South Dakota School of Mines and Technology B.S., 1986, Geology, Ohio State University			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS Member, International Mine Water Association Member, American Institute of Professional Geologists Member, Society of Economic Geologists		REGISTRATION (Type, Year, State) Professional Geologist, 1987, Wyoming and Oregon	
13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)			
NAME & TITLE (Last, First, Middle Int.) Gue, James B. Mine Reclamation	YEARS OF EXPERIENCE: 30	YEARS OF AML RELATED DESIGN EXPERIENCE: 30	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 10
	Brief Explanation of Responsibilities Employee of the Ohio Department of Natural Resources Division of Mineral Resources Management, Abandoned Mine Lands Section for 30 years. Planned, monitored and developed Abandoned Mine Lands Reclamation projects. Public Health and Safety projects were related to strip mine highwall elimination and spoil bank stabilization. Deep mine related projects involved shaft closures sensitive to bat habitat issues and gob pile fires. Mine drainage contaminated water supply projects involved private well replacements and public water line installations. Investigated and recommended mitigation designs for acid mine drainage projects. All work conducted via Department of Interior, Office of Surface Mining, approved grants and methodologies.		
EDUCATION (Degree, Year, Specialization) B.S. 1981 Kent State University Natural Resource Conservation			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State)	

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

<p>NAME & TITLE (Last, First, Middle Int.) Ginnetti, Patrick, P.E., P.L.S. Mine Reclamation</p>	<p>YEARS OF EXPERIENCE</p>	
	<p>YEARS OF AML DESIGN EXPERIENCE: 2+</p>	<p>YEARS OF AML RELATED DESIGN EXPERIENCE: 2+</p>
<p>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0</p>		
<p>Brief Explanation of Responsibilities Design Specialist for the Ohio Department of Natural Resources, Mineral Resources Management responsible for plan production and final review for acid mine drainage treatment systems, including land surveying, engineering design, stormwater calculations, EPA permits, Army Corps permits, grading, earthwork calculations and field inspection.</p>		
<p>EDUCATION (Degree, Year, Specialization) B.E., 1995, Civil and Environmental Engineering 1997, Certificate of Land Surveying</p>		
<p>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS PLSO, NSPE, OSPE, ACSM, ASCE</p>		
<p>REGISTRATION (Type, Year, State) Professional Engineer, 2011-PA, 2011-OH Professional Surveyor, 2001-PA; 2011-OH</p>		

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

<p>NAME & TITLE (Last, First, Middle Int.) Kitzmilller, Tony Mine Reclamation</p>	<p>YEARS OF EXPERIENCE: 17</p>	
	<p>YEARS OF AML DESIGN EXPERIENCE: 38</p>	<p>YEARS OF AML RELATED DESIGN EXPERIENCE: 38</p>
<p>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0</p>		
<p>Brief Explanation of Responsibilities Mr. Kitzmilller has over 37 years of experience in the design of water distribution systems, drainage systems, mine engineering, and civil engineering. He has experience with the supervision of design and construction for coal mining in Northern West Virginia, including water discharges, slurry, and refuse construction. He is intimately familiar with mining conditions and construction, including the design of bridges and roadways near mines. He has experience in managing and construction of methane drainage wells.</p>		
<p>EDUCATION (Degree, Year, Specialization)</p>		
<p>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS</p>		
<p>REGISTRATION (Type, Year, State)</p>		

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

NAME & TITLE (Last, First, Middle Int.) Cowburn, Scott, P.E. Water Treatment	YEARS OF EXPERIENCE	
	YEARS OF AML DESIGN EXPERIENCE: 24	YEARS OF AML RELATED DESIGN EXPERIENCE: 24 YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0

Brief Explanation of Responsibilities
 Scott will provide design of necessary water treatment and conveyance systems for this assignment.

EDUCATION (Degree, Year, Specialization)
 B.S., 1985, Civil Engineering, University of Lowell
 B.S., 1980, Biology, State University of New York at Cortland

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS
 Member, American Water Works Association
 Member, Pennsylvania Water Environment Association
 Member, Engineer's Society of Western Pennsylvania

REGISTRATION (Type, Year, State)
 Professional Engineer, 1989, New Hampshire, Rhode Island and Pennsylvania

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

NAME & TITLE (Last, First, Middle Int.) Mehrotra, Anna, Ph.D., P.E. Water Treatment	YEARS OF EXPERIENCE	
	YEARS OF AML DESIGN EXPERIENCE: 9	YEARS OF AML RELATED DESIGN EXPERIENCE: 9 YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0

Brief Explanation of Responsibilities
 Anna will provide design of necessary water treatment and conveyance systems for this assignment.

EDUCATION (Degree, Year, Specialization)
 Ph.D., 2003, Environmental Engineering, UC Berkeley
 M.S., 1995, Environmental Engineering, Stanford University
 B.S., 1993, Mathematics/Applied Science, UCLA

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS
 Member, American Society of Civil Engineers
 Member, Water Environment Federation

REGISTRATION (Type, Year, State)
 Professional Engineer, 2010, Ohio

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

NAME & TITLE (Last, First, Middle Int.) Burbage, Laura Biologist	YEARS OF EXPERIENCE	
	YEARS OF AML DESIGN EXPERIENCE: 7	YEARS OF AML RELATED DESIGN EXPERIENCE: 7
YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0		

Brief Explanation of Responsibilities
 Laura will serve as a biologist on this assignment, assessing impact to habitat.

EDUCATION (Degree, Year, Specialization)
 Masters, 2005, Landscape Architecture, University of Georgia
 M.S., 2004, Ecology, University of Georgia
 B.A., 1994, Biological Sciences, Smith College

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS
 Member, Society for Ecological Restoration International
 Member, Society of Wetland Scientists
 Member, Association of State Wetland Managers
 Alternate Member, City of Hampton Virginia Wetlands Board

REGISTRATION (Type, Year, State)

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

NAME & TITLE (Last, First, Middle Int.) Dunk, Dwight, P.W.S. Biologist	YEARS OF EXPERIENCE: 17	
	YEARS OF AML DESIGN EXPERIENCE: 22	YEARS OF AML RELATED DESIGN EXPERIENCE: 22
YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0		

Brief Explanation of Responsibilities
 Dwight will assess impacts to wetlands for this assignment.

EDUCATION (Degree, Year, Specialization)
 M.S., 1996, Biology/Applied Marine Ecology, University of Massachusetts/Boston
 B.S., 1987, Biology/Ecology, University of Massachusetts/Boston

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS
 Member, Society of Wetland Scientists
 Member, Ecological Society of America

REGISTRATION (Type, Year, State)
 Professional Wetland Scientist, Society of Wetland Scientists
 Certified Wetland Scientist, State of New Hampshire
 Certified Ecologist, Ecological Society of America

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)			
NAME & TITLE (Last, First, Middle Int.) Johnson, Theodore J., P.E., CFM Biologist	YEARS OF AML DESIGN EXPERIENCE: 30	YEARS OF AML RELATED DESIGN EXPERIENCE: 30	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
Brief Explanation of Responsibilities Ted will asses impacts to streams for this project.			
EDUCATION (Degree, Year, Specialization) B.S., 1982, Civil Engineering, University of Colorado A.A.S., 1978, Land Surveying, Flathead Valley Community College			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS Member, American Water Resources Association Member, American Society of Civil Engineers Member, Water and Environment Federation		REGISTRATION (Type, Year, State) Professional Engineer, 1989, Colorado	
13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML DEVELOPMENT PROJECTS (Furnish complete data but keep to essentials)			
NAME & TITLE (Last, First, Middle Int.) Stafford, Wesley Hydrologic/Hydraulic Evaluation and Design	YEARS OF AML DESIGN EXPERIENCE: 23	YEARS OF AML RELATED DESIGN EXPERIENCE: 23	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
Brief Explanation of Responsibilities Wes will provide hydrologic/hydraulic evaluation and design for this project.			
EDUCATION (Degree, Year, Specialization) B.S., 1988, Civil Engineering, West Virginia University			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS President, American Society of Civil Engineers Member, American Planning Association Member, American Council of Engineering Companies Member, American Institute of Certified Planners		REGISTRATION (Type, Year, State) Professional Engineer, 1993, North Carolina, Maryland, Virginia and West Virginia American Institute of Certified Planners, 2003	

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)			
NAME & TITLE (Last, First, Middle Int.) Shamblin, Cynthia L., P.E. Hydrologic/Hydraulic Evaluation and Design	YEARS OF AML DESIGN EXPERIENCE: 27	YEARS OF AML RELATED DESIGN EXPERIENCE: 27	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
Brief Explanation of Responsibilities Cynthia will provide hydrologic/hydraulic evaluation and design for this project.			
EDUCATION (Degree, Year, Specialization) M.S., 1989, Structural Engineering, Virginia Polytechnical Institute and State University B.S., 1984, Civil Engineering, West Virginia Institute of Technology			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS Member, National Council of Examiners for Engineering and Surveying		REGISTRATION (Type, Year, State) Professional Engineer, 1991, West Virginia, North Carolina, Virginia, Washington, D.C.	
13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML DEVELOPMENT PROJECTS (Furnish complete data but keep to essentials)			
NAME & TITLE (Last, First, Middle Int.) Huddleston, Jason B. Hydrologic/Hydraulic Evaluation and Design	YEARS OF AML DESIGN EXPERIENCE: 10	YEARS OF AML RELATED DESIGN EXPERIENCE: 10	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
Brief Explanation of Responsibilities Jason will support hydrologic/hydraulic evaluation and design for this project.			
EDUCATION (Degree, Year, Specialization) A.S., 2001, Electrical Engineering, West Virginia University Institute of Technology			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State)	

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

NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE	
Neely, Michael A., P.E. Hydrologic/Hydraulic Evaluation and Design		YEARS OF AML DESIGN EXPERIENCE: 6	YEARS OF AML RELATED DESIGN EXPERIENCE: 6
<p>Brief Explanation of Responsibilities Mike will provide hydrologic/hydraulic evaluation and design for this project.</p>		YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0	
EDUCATION (Degree, Year, Specialization) B.S., 1996, Civil Engineering			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State) Professional Engineer, WV Professional Engineer, FL	
13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML DEVELOPMENT PROJECTS (Furnish complete data but keep to essentials)			
NAME & TITLE (Last, First, Middle Int.) Martin, Reason W. Construction Inspection		YEARS OF AML DESIGN EXPERIENCE: 13	YEARS OF AML RELATED DESIGN EXPERIENCE: 13
<p>Brief Explanation of Responsibilities Reason will provide construction inspection for this assignment.</p>		YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0	
EDUCATION (Degree, Year, Specialization) B.S., 1994, Engineering Technology, West Virginia Institute of Technology			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State)	

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

NAME & TITLE (Last, First, Middle Int.) Rhodes, Damon, P., P.E. Construction Inspection	YEARS OF AML DESIGN EXPERIENCE: 13	YEARS OF AML RELATED DESIGN EXPERIENCE: 13	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
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Brief Explanation of Responsibilities
Damon will provide construction inspection for this assignment.

EDUCATION (Degree, Year, Specialization)
B.S., 1995, Civil Engineering, Lehigh University

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS
Member, Engineer's Society of Western Pennsylvania
Treasurer, Construction Management Association of America
Member, American Society of Civil Engineers
Board Member, Friends of the Riverfront
Traffic and Transportation Sub-Committee Chairman, City of Pittsburgh/Allegheny County Gaming Implementation Task Force

REGISTRATION (Type, Year, State)
Professional Engineer, 2000, Illinois, Iowa and Pennsylvania

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

NAME & TITLE (Last, First, Middle Int.) Connor, Janet A. Geotechnical Engineering	YEARS OF AML DESIGN EXPERIENCE: 4	YEARS OF AML RELATED DESIGN EXPERIENCE: 4	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
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Brief Explanation of Responsibilities
Janet will provide geotechnical engineering for this assignment.

EDUCATION (Degree, Year, Specialization)
B.S., 2008, Civil Engineering, Valparaiso University

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

REGISTRATION (Type, Year, State)
Engineer-in-Training, 2008

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

NAME & TITLE (Last, First, Middle Int.) Vinson, James L., P.E. Geotechnical Engineering	YEARS OF EXPERIENCE: 20	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
	YEARS OF AML DESIGN EXPERIENCE: 17	YEARS OF AML RELATED DESIGN EXPERIENCE: 17

Brief Explanation of Responsibilities
James will provide geotechnical engineering for this assignment.

EDUCATION (Degree, Year, Specialization)
M.S., 1997, Civil Engineering, Auburn University
B.S., 1995, Civil Engineering, Mississippi University

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS
Presenter, Local Chapter of American Society of Civil Engineers
Presenter, Southeastern Transportation Geotechnical Engineering
Presenter, Deep Foundations Institute

REGISTRATION (Type, Year, State)
Professional Engineer, 2001, North Carolina, Tennessee, Kentucky, Mississippi, Texas, Virginia and West Virginia

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

NAME & TITLE (Last, First, Middle Int.) Chad E. Stonebraker, Senior CADD Technician	YEARS OF EXPERIENCE	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
	YEARS OF AML DESIGN EXPERIENCE: 1	YEARS OF AML RELATED DESIGN EXPERIENCE: 0

Brief Explanation of Responsibilities
Chad will serve on one of the design teams.

EDUCATION (Degree, Year, Specialization)
Associate, 2000, CADD Technology

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

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

CDM has invested approximately 2.5 million dollars in its field equipment inventory for projects involving Air Monitoring & Sampling, Confined Space Entry, Site Support, Soil Analysis, Soil Sampling, Survey Testing & Measuring, Treatability/Bench Scale, Water Level & Flow, Water Quality, Water Sampling, and Weather Consumables. This equipment can be shipped over night to any project site from the firm's own field equipment centers in Albuquerque, New Mexico; Somerville, Massachusetts; Edison, New Jersey; and Irvine, California.

CDM engineers have developed and used several computerized stormwater models considered to be state-of-the-art for stormwater management studies, including those listed in the table below.

Model Acronym	Full Title	Sponsor/Developer
BASINS-HSPF	Better Assessment Science Integration Points and Nonpoint Sources	EPA OST
DR3M-QUAL	Distributed Routing Rainfall Runoff Model	U.S. Geological Survey
BRASS (RUNOFF)	Basin Runoff and Streamflow Simulation	USACE-Hydrologic Engineering Center
DRM	Deep Reservoir Water Quality Model	CDM
DYNQUAL	Estuary Hydrodynamic Water Quality Model	CDM
ECOHYD	Estuary Water Quality/Ecologic Model	CDM
HEC-1	HEC-1 Flood Hydrograph Package	USACE-Hydrologic Engineering Center
HEC-2	Water Surface Profiles	USACE-Hydrologic Engineering Center
HEC-RAS	River Analysis System	USACE-Hydrologic Engineering Center
HEC-HMS	Hydrologic Management System	EPA
HSPF	Hydrological Simulation Program- FORTRAN	Illinois State Water Survey
ILLUDAS	Illinois Urban Drainage Area Simulator	U.S. Department of Agriculture
KINEROS	Kinematic Runoff and Erosion Model	CDM
LAKECO	Lake Ecology Model	Danish Hydraulic Institute
MIKE-11	Generalized Modeling Package - 1D - Runoff	Danish Hydraulic Institute
MIKE-SHE	MIKE-SHE (MIKE 11 integrated w/ groundwater model)	Narragansett Bay Project
P8-UCM	Urban Catchment Model	U.S. Geological Survey
PRMS/ANNIE	Precipitation-Runoff Modeling System	CDM
QUALII	Steady State Stream Water Quality	CDM
RECEIV	Dynamic Receiving Water Quality (included in SWMM)	EPA / CDM
RUNOFF	Surface Flow Routine	Omicron Associates
SITEMAP	Stormwater Intercept and Treatment Evaluation Model for Analysis and Planning	Dr. Robert Pitt (University of Alabama)
SLAMM	Source Loading and Management Model	USACE-Hydrologic Engineering Center
STORM	Storage Treatment Overflow Runoff Model	EPA/Oregon State University/CDM
SWMM	Stormwater Management Model (3)	EPA and Oregon State University
SWMM/RUNOFF	SWMM RUNOFF block	EPA / CDM
SWMM/EXTRAN	SWMM EXTRAN block	Urban Drainage & Flood Control District
UDSWM	Urban Drainage Storm Water Model	Urban Drainage & Flood Control District
CUHP	Colorado Urban Hydrograph Procedure	U.S. Department of Agriculture
TR-55/20	Urban Hydrology for Small Watersheds	CDM
WMM	Watershed Management Model	CDM
WRECEV	Modified Receiving Water Quality and Unsteady Flows	CDM

15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD (Partial Listing of Projects)

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
CERCLA, Molycorp Molybdenum Mine, Questa, New Mexico	USEPA, Region 6 1445 Ross Avenue Suite 1200 Dallas, Texas 75202	RI/FS	\$1,800,000	50
Remedial Action, Upper Tenmile Creek Mining Area OU4, Helena, Montana	USEPA, Region 8, 1595 Wynkoop St Denver, CO 80202-1129	RI/FS	\$6,700,000	50
Environmental Engineering Services, Gilt Edge Mine Site, Lawrence County, South Dakota	USEPA, Region 8, 1595 Wynkoop St Denver, CO 80202-1129	Environmental Engineering	\$12,431,771	50
CERCLA RI/FS Oversight, Butte Priority Soils Mining Site, Montana	USEPA, Region 8, 1595 Wynkoop St Denver, CO 80202-1129	CERCLA RI/FS Oversight	\$160,000,000	50
C.R. Kendall Mine Post-Closure Drainage Improvements and Environmental Impact Statement, Lewistown, Montana	Montana Department of Environmental Quality 1520 East 6 th Avenue Helena, MT 59601	Environmental Engineering	\$10,000,000	50
Ault Park Stream Restoration, Cincinnati MSD, Cincinnati, Ohio	Cincinnati MSD 1600 Gest St. Cincinnati, OH 45204	Environmental Engineering	\$5,000,000	75
TOTAL NUMBER OF PROJECTS: 6			TOTAL ESTIMATED CONSTRUCTION COSTS: \$200 million	

17. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM WAS THE DESIGNATED ENGINEER OF RECORD (Partial Listing of Projects)					
PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)	
RI/FS/Remedial Design/Remedial Action, Town of Basin Superfund Site, Basin, Montana	USEPA, Region 8, 1595 Wynkoop St Denver, CO 80202-1129	\$5,800,000	2005	Yes	
Remedial Action Oversight, Remedial Design, Midvale Slag Superfund Site, Midvale, Utah	USEPA, Region 8, 1595 Wynkoop St Denver, CO 80202-1129	\$16,850,000	2007	Yes	
Abbott Mine Site Stabilization, Lake County, California	EI Paso Energy 1001 Louisiana Street Houston, TX 77002	\$5,000,000	2007	Yes	
North Fork Indian Run Bank Stabilization at Brand Road, Dublin, Ohio	City of Dublin, Ohio 5200 Emerald Parkway Dublin, Ohio 43017-1006	\$237,475	2005	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

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.

Please see the narrative provided at the end of the submittal

20. The foregoing is a statement of facts.

Signature: Matthew R. Sickles Title: Vice President

Printed Name: Matthew R. Sickles

Date: March 15, 2012

Section 4 Qualifications

Introduction to the CDM Smith Team

CDM Smith Inc. (CDM Smith) has teamed with Herbert, Rowland & Grubic, Inc. (HRG) to successfully complete this project.

About CDM Smith

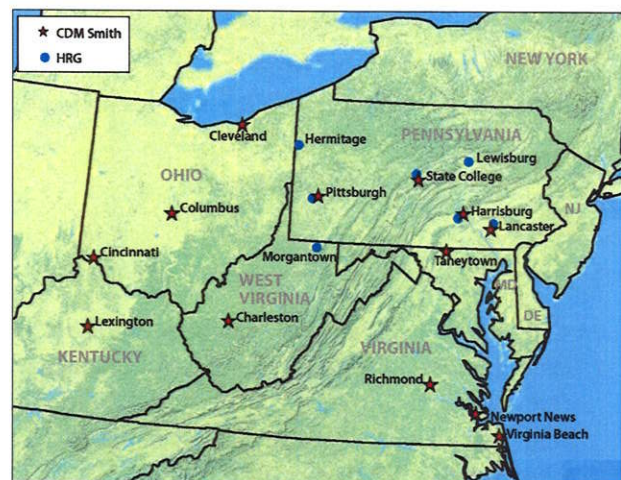
CDM Smith is a worldwide, full-service consulting, engineering, construction and operations firm helping public and private clients improve the environment and infrastructure. Founded as a partnership in 1947, the firm was incorporated as Camp Dresser & McKee in 1970 in the Commonwealth of Massachusetts, with the firm's headquarters still residing in Cambridge, Mass. Throughout the last five and a half decades, CDM Smith has grown steadily to its current position as a leading professional in water, environment, transportation, energy and facilities.

On February 25, 2011, CDM and international transportation consultant Wilbur Smith Associates (WSA) joined forces to become CDM Smith. In addition to compatible cultures, complementary capabilities and well-matched geographies, both firms are dedicated to exceptional client service and technical excellence. Together, our unwavering focus remains on creating innovative and lasting solutions that improve environmental value, quality of life and economic prosperity. With more than \$1 billion in annual revenues, we maintain the size, stability and resources to successfully undertake a diverse range of projects, applying local knowledge through a network of more than 125 offices worldwide while leveraging the full resources and expertise of our 5,500 global staff.

Local Offices, National Reach

The CDM Smith team provides WV DEP with local personnel who have national resources to draw from.

Within our Charleston, WV office, we have five WV registered professional engineers, four design teams, as well as relevant support service staff. These individuals may be further supported by our four design teams located in our team's Morgantown, WV and Pittsburgh, PA offices, as well as senior advisement professionals.



About Herbert, Rowland & Grubic

Herbert, Rowland & Grubic, Inc. (HRG) provides public and private sector clients with full service capabilities in the design of civil infrastructure related to stormwater and watershed management, water and wastewater treatment systems, roadways, bridges and site development. This includes capabilities in civil and municipal engineering, surveying, Geographic Information Systems development, financial consulting, and electrical/mechanical engineering.

Team Experience

Water Resources

CDM Smith's water resources division originated as a supplement to highway design, addressing drainage issues on our nation's roadways. Later, these methods were applied to urban and rural development projects. As the company expanded its capabilities, new opportunities surfaced. Since then, the water resources group has evolved into a full service division, supporting not only highway design, but urban and rural planning, site development and other infrastructure and municipal services. Water resources services include:

- hydrology and hydraulics
- hydrodynamic modeling
- drainage and waterline design
- detention ponds/lakes
- stormwater master plans
- stormwater utility development
- FEMA flood studies
- flood control strategies
- watershed modeling
- bridge scour studies
- river mechanics and modeling
- stream restoration
- pump stations

Geotechnical Investigation and Reports

CDM Smith has integrated geotechnical engineering, pavement design, and foundation/site-related construction services into the design of our highway and bridge structures, commercial buildings, power plants, dams, ports, airports, and industrial facilities. Our geotechnical engineering services include:

- subsurface investigations
- shallow and deep foundation design
- slope stability analyses
- earth retaining structures and reinforced slopes
- rock slope engineering
- seismic hazard analysis
- ground improvement
- earth dam engineering
- seepage and dewatering analysis
- pavement design and management systems

Environmental Engineering

CDM Smith has provided our clients and the community with environmental planning and National Environmental Policy Act services for over 30 years. This includes over 250 completed projects in more than 36 states. Our environmental capabilities address all transportation modes including, aviation, rail, transit, roadways, bridges, and ports, in addition to site development projects. Our firm is unique because we have in-house technical staff to address the full range of NEPA technical disciplines. This multi-discipline approach provides a culture that encourages creativity and non-traditional methods, thus

bringing new ideas and streamlining processes to our clients. In addition to NEPA documentation and a variety of wetland, endangered species, and other natural resource assessments, our experience includes:

- noise and air quality modeling
- hazardous materials surveys
- community impact assessments
- environmental justice analysis
- public and stakeholder involvement
- agency coordination letters
- geographic information services

Engineering (Bridge Design)

WSA continues to be a leader in contemporary bridge technology. Our work falls into nearly every category of bridge configuration and contemporary structural materials, and every type of highway structure including overhead signs, mast lights, tension poles, pedestrian bridges, and pedestrian and traffic tunnels and culverts. From feasibility studies, inspections and investigations to new and rehabilitative design and contract documents, WSA is a leader in bridge technology.

- pioneered the design of embedded “integral” post-tensioned caps in structural steel bridges — a first in the U.S.
- employed state-of-the-practice non-linear, structural seismic analysis techniques
- developed the FHWA inspection manual for fracture-critical bridge members — providing instruction for more than 10 years
- 35 years of bridge research for FHWA and the National Academy of Sciences — used in technology transfer worldwide
- extensive experience in bridge hydraulics
- experience ranging from the simplest, single-span bridge to analysis and design of complex structures

Cultural Resources

CDM Smith offers a full scope of archaeological services from Phase I survey to Phase III mitigation and cultural historic surveys and National Register evaluations including resource management. We have a staff of professional archaeologists, architectural historians as well as access to surveyors, computer mapping specialists with expertise in CAD and GIS software and techniques, and graphic artists. CDM Smith has provided cultural resources services on numerous department of transportation projects in Kentucky, Michigan, Tennessee, South Carolina, and West Virginia. Previously, CDM Smith has held the Statewide Cultural Resources contract with WVDOH and has been able to supply archaeological and cultural historic services on a couple of projects.

Throughout its history, CDM Smith has performed a significant number of archaeological and cultural historic projects. Our experience conducting archaeological investigations varies from small scale prehistoric sites to large scale historic farmsteads and industrial complexes. Cultural historic studies performed by CDM Smith include the Statewide Historic Bridge Survey, in which over 300 structures were identified and evaluated. Other recent transportation cultural historic survey projects include the proposed I-66 corridor, in which over 400 structures were surveyed, and KY 52, which contained over 350 evaluated structures.

Natural Resources

As a part of our environmental engineering and planning services, CDM Smith provides services related to natural resource assessment, including wetland/ stream mitigation, pre-construction notification, threatened and endangered species surveys, neotropical and migratory bird habitat and stream buffer variance applications. Additionally, our personnel have experience in the preparation of natural resource reports in support of Categorical Exclusions, Environmental Assessments, and Environmental Impact Statements for transportation projects.

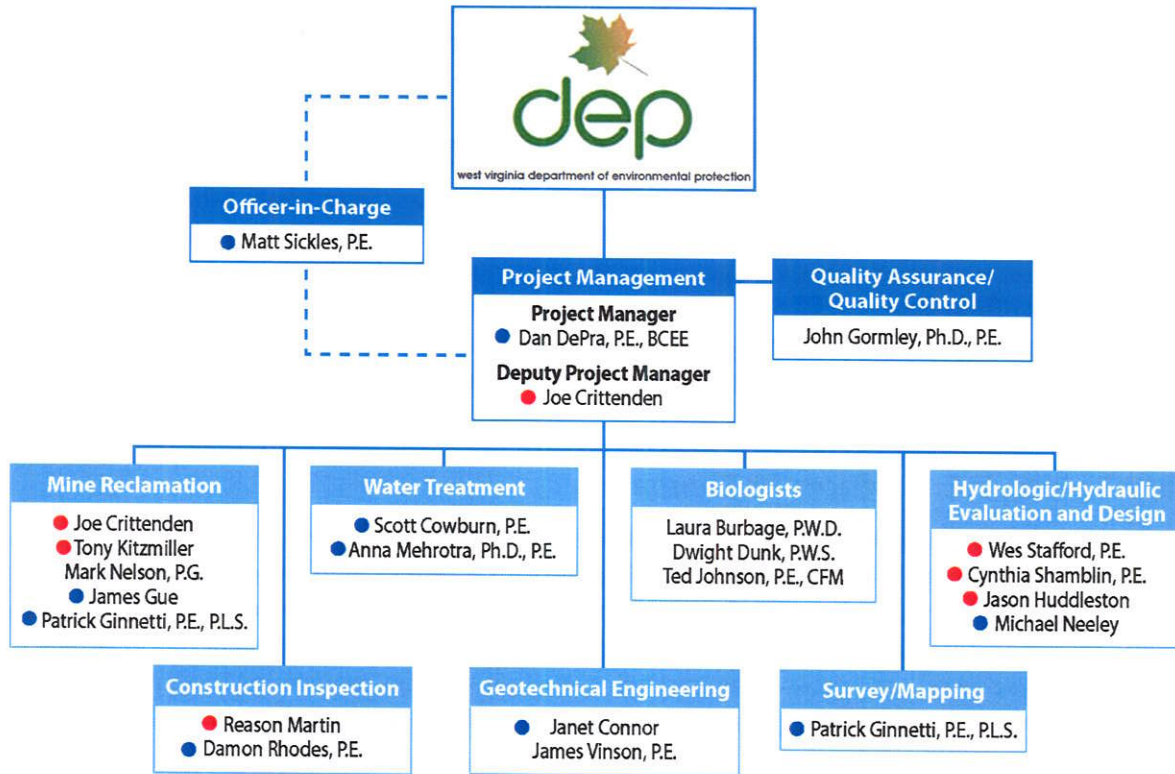
Right-of-Way Services

CDM Smith's right-of-way practice serves as an integral part to the success of our projects. Our professionals are equipped to support public and private sector clients nationwide in planning, negotiations, and relocations. We offer extensive knowledge in permitting and real estate law and possess above-average communication and people skills in order to minimize condemnation rates. Our creative solutions are a precursor to your success and guaranteed to help you achieve your goals. CDM Smith's Charleston office has provided the following right-of-way services to WVDOT under past statewide agreements for right-of-way functions:

- review of right-of-way invoices (procurement by the Department by option, deed, or an agreement)
- review of condemnation packages for invoicing
- property management
- preparation of property descriptions
- plan review
- project oversight
- right-of-way stakeouts

Personnel Qualifications

The figure below presents a proposed organization chart for this assignment. Brief biographies of proposed staff follow.



- - Located in Charleston, WV primary office
- - Located in supporting Morgantown, WV or Pittsburgh, PA offices

Dan DePra, P.E., BCEE – Project Manager

Mr. DePra is a senior project manager and environmental engineer with 18 years of diverse technical experience in managing multi-discipline projects and designing and implementing environmental compliance programs, environmental audits and permitting, and remediation projects. He has also conducted federal, state and local regulatory reporting and negotiation.

In addition, Mr. DePra is an energetic and excellent communicator, who has a talent for organizing and executing the details of complex and multi-discipline projects. He is particularly skilled at the Project Controls aspects of management, including scheduling, scope development, financial evaluation and tracking, contracts, and subcontractor management.

George (Joe) Crittenden – Deputy Project Manager

Mr. Crittenden has 36 years of experience in providing project management, client coordination, project design, design studies, value engineering, construction inspection, and surveying for abandoned mine land reclamation, correctional facilities, government projects, private developments, highways, airports, and residential subdivision projects. Mr. Crittenden has been involved in grading, drainage, new highway design, roadway improvement, and bridge replacement projects in multiple locations within West Virginia, Tennessee, Georgia, South Carolina, New Jersey, Pennsylvania, and Kentucky. Many of the projects were of a “fast track” nature.

Matt Sickles, P.E. – Officer-in-Charge

Mr. Sickles is an environmental/civil engineer with 23 years of engineering and project management experience in a variety of environmental and civil projects for transportation, municipal and industrial clients. Mr. Sickles has management and engineering experience with environmental investigations and studies, civil and remedial designs, mitigation designs, preparing specifications and design drawings, permitting, bid services, construction administration services, resident engineering services, and operation and maintenance. He has provided management and engineering services for a large number of multi-discipline projects.

John Gormley, Ph.D., P.E. – Quality Assurance/Quality Control

Dr. Gormley has 42 years of experience in management, analysis, design and field investigation projects for industry and government. His experience relates to the mining, water resources and energy development sectors. His experience spans the life cycle of projects, from inventory, baseline data development and impact evaluation to planning, alternative analysis, public involvement, preliminary and final design, construction, operation and restoration. He has been instrumental in developing and nurturing multidisciplinary teams and problem solving in the consultancies in which he practiced.

Mining sector experience includes surface and underground projects in hard rock, uranium, coal and lignite. Assignments have included inventories, reports of investigation, preliminary and final designs, construction quality control and construction reports for Abandoned Mine Lands (AML) reclamation projects; mine land reclamation design for new and operating mines; passive treatment designs for acid mine/rock drainage; design of earth and rock structures; environmental impacts assessments and audits.

Tony Kitzmiller – Mine Reclamation

Mr. Kitzmiller has over 37 years of experience in the design of water distribution systems, drainage systems, mine engineering, and civil engineering. He has experience with the supervision of design and

construction for coal mining in Northern West Virginia, including water discharges, slurry, and refuse construction. He is intimately familiar with mining conditions and construction, including the design of bridges and roadways near mines. He has experience in managing and construction of methane drainage wells.

Mark Nelson, P.G. – Mine Reclamation

Mr. Nelson has worked in various facets of the mining industry since 1988 with a focus on hydrogeology and environmental geochemistry, mine permitting and regulation, mine environmental management, and mine reclamation. He has worked on over 70 mining projects including gold, base metals, uranium, and industrial minerals projects in Nevada, California, Idaho, Oregon, South Dakota, Wyoming, Colorado, New Mexico, and Inner Mongolia, China. Mr. Nelson has worked at some of the largest open pit mines in the U.S. and the deepest underground mine in the western hemisphere. He has experience working with mining corporations ranging in size from juniors to majors, state regulatory agencies, and federal agencies including U.S. Forest Service (USFS), Bureau of Land Management (BLM), Environmental Protection Agency (EPA), and U.S. Army Corps of Engineers (USACE). Mr. Nelson has the expertise to understand complex technical issues related to mine hydrogeology and geochemistry and the knowledge and experience to apply this expertise to environmental evaluations, permitting, environmental management, and reclamation.

James B. Gue – Mine Reclamation

Mr. Gue was an employee of the Ohio Department of Natural Resources Division of Mineral Resources Management, Abandoned Mine Lands Section for 30 years. Planned, monitored and developed Abandoned Mine Lands Reclamation projects. Public Health and Safety projects were related to strip mine highwall elimination and spoil bank stabilization. Deep mine related projects involved shaft closures sensitive to bat habitat issues and gob pile fires. Mine drainage contaminated water supply projects involved private well replacements and public water line installations. Investigated and recommended mitigation designs for acid mine drainage projects. All work conducted via Department of Interior, Office of Surface Mining, approved grants and methodologies.

Patrick T. Ginnetti, P.E., P.L.S. – Mine Reclamation, Survey/Mapping

Mr. Ginnetti was a design specialist for the Ohio Department of Natural Resources, Mineral Resources Management responsible for plan production and final review for acid mine drainage treatment systems, including land surveying, engineering design, stormwater calculations, EPA permits, Army Corps permits, grading, earthwork calculations and field inspection.

Scott Cowburn, P.E., BCEE – Water Treatment

Mr. Cowburn is a project manager with extensive experience in a variety of industrial and municipal sanitary engineering projects including water and wastewater treatment facility planning and evaluations, sewer system evaluation surveys, construction services, environmental assessment studies, and design of modifications to treatment facilities.

Anna Mehrotra, Ph.D., P.E. – Water Treatment

Dr. Mehrotra is an environmental engineer with experience in wastewater process analysis and modeling, wastewater treatment plant design, pilot studies, water quality modeling and surveys, and constructed wetland engineering.

Laura Burbage – Biologist

Ms. Burbage specializes in wetland science, ecological restoration, natural resources assessment and management, and park/natural area design. She has designed ecological restoration programs, has an in-depth understanding of ecosystems (particularly of plant, wetland and aquatic systems ecology) and the interactions between biotic and abiotic components of the environment. Ms. Burbage is experienced with environmental permitting, including: alternatives analysis, state wetland permitting, National Environmental Policy Act (NEPA), and writing reports for federal, state and local government clients. She has also assessed CERCLA sites and provided oversight of on-site remediation activities. She is also Rosgen trained for natural stream channel design methodology.

Dwight Dunk, P.W.S. – Biologist

Mr. Dunk is a senior environmental scientist and serves as CDM Smith's environmental services task manager for large multi-disciplined projects and environmental impact projects. His primary scientific expertise is in the field of freshwater and coastal wetland ecology including: environmental planning; wetland function and value assessment; environmental impact assessment; Stage I ecological risk assessment; feasibility studies; ecological/wetland mitigation planning, design and construction oversight; resource area delineation; wildlife habitat assessment; and vernal pool identification and monitoring. Environmental policy/permitting experience includes preparing National Environmental Policy Act (NEPA) documents and state level equivalents as well as securing federal, state and local environmental permits for public infrastructure; solid waste and hazardous waste management; transportation; and commercial development projects.

Ted Johnson, P.E., CFM – Biologist

Mr. Johnson has 30 years of experience in environmental engineering, specializing in the planning, design and construction of storm drainage, flood control, channel stability and ecologic enhancement of stormwater and river systems. Mr. Johnson also has developed expertise in regulatory coordination including Clean Water Act, Endangered Species Act, NEPA and CEQA requirements; the use of GIS in analyses of project criteria and requirements; hydrology and hydraulics analyses; sediment transport and scour and deposition analyses; erosion control BMPs; and habitat analyses.

Wes Stafford, P.E. – Hydrologic/Hydraulic Evaluation and Design

Wes Stafford began his career in 1988 and joined CDM Smith's Charleston, WV office in 2003. Since then, he has led numerous highway planning and design, traffic engineering, and environmental projects. He has also worked for the West Virginia Department of Transportation, and led the North Carolina Department of Transportation's Statewide Planning Branch Small Urban Planning Unit. In this role he provided counties, planning regions, and municipalities with transportation planning expertise.

Cynthia Shamblin, P.E. – Hydrologic/Hydraulic Evaluation and Design

Ms. Shamblin began her career in 1984 as an engineer-in-training with the Naval Sea Systems Command. She joined CDM Smith in 2007 as a senior structures project manager, where she focuses on designing and managing award-winning bridge and structure projects.

Mr. Vinson's responsibilities include the development and coordination of site investigations and laboratory testing programs, performance and review of design calculations, communicating observations and recommendations to clients and team members, preparation of design reports and contract documents, and managing project schedules and budgets. He has expertise and experience with performing subsurface explorations and providing recommendations for shallow and deep foundations,

With over 17 years of experience in the geotechnical field, Mr. Vinson has worked on a broad range of civil engineering projects, including roadways, bridges, earth retaining structures, buildings, industrial facilities, towers, and dams. He has served as the project manager and/or geotechnical engineer of record for projects in numerous locales and geologic settings. Mr. Vinson has also worked with multiple public and private clients and performed significant roles on several complex design-build transportation projects.

James Vinson – Geotechnical Engineering

Ms. Connor is a civil engineer experienced in site observation, field reporting, bore logging, slope stability analysis, and report writing. She has drafted geotechnical specifications, conducted sample collection, and performed quality assurance/control for field testing. She has also designed municipal utility layouts, inspected hydrologic sites, and analyzed consumer needs in solid waste management.

Janet Connor – Geotechnical Engineering

Mr. Rhodes has 13 years of experience in the transportation engineering industry during which he has successfully managed all aspects of urban transportation and major construction projects, including implementing standardized construction management procedures; selecting, managing and training inspection staff; developing and monitoring project budgets; establishing and monitoring project milestones goals; and leading multiple construction management teams on concurrent projects. He has been involved in all phases of construction from preliminary design to post-construction claim resolution.

Damon Rhodes, P.E. – Construction Inspection

After receiving degrees in civil engineering technology, Mr. Martin began his career in 1999 as a surveyor for an engineering consultant firm. He joined CDM Smith in 2000 as a construction inspector for a major highway project. Since then he has contributed to a number of roadway and bridge projects around the country as a CAD/D technician, designer, and inspector.

Reason Martin – Construction Inspection

Mr. Neely is a civil engineer who has performed numerous hydrologic and hydraulic analyses in West Virginia. His resume includes complete design of storm water management, storm drainage, gravity sanitary sewer, lift station, force main and potable water facilities. Mr. Neely has completed site grading for residential subdivisions, public facilities and commercial projects, as well as developed complete erosion and sediment control plans.

Michael A. Neely, P.E. – Hydrologic/Hydraulic Evaluation and Design

Mr. Huddleston began his career as an engineering technician. He joined CDM Smith in 2002 as an engineering technician, where his major duties include drafting roadway and structural elements and modeling related to roadway and bridge projects and plan presentation.

Jason Huddleston – Hydrologic/Hydraulic Evaluation and Design

earth retaining structures, earthwork, slopes, pavements, dams, and construction monitoring and consultation.

Corporate Experience

CDM Smith has been doing related work since the inception of our firm in 1947. The project description matrix and AML questionnaire identify some of our most relevant projects. At WVDEP's request, we are happy to provide expanded descriptions of these projects and for a large number of other related projects beyond those that were identified.

Management Plan and Location of Facilities

Management Plan

CDM Smith's proposed project team organization is presented on page 4-4. Our Primary Office for this work is the CDM Smith Charleston, WV office located at Geary Plaza, Suite 210, 700 Washington Street, East, Charleston, WV 25301. Additional Design Team (WV PE and designer/drafter) and support staff are located within our team's Morgantown, WV and Pittsburgh, PA offices. Our project team also offers additional senior advisement / quality review support from staff outside these office locations based on their significant relevant experience.

Our proposed project management team approach is to provide the WVDEP AML program with exceptional client service in the form of strong communication and staff/budget/schedule/quality management skills. Our project management team will be responsible for serving as your primary point of contact while delivering design team resources and quality deliverables that meet or exceed our approved budgets and schedules. Mr. Dan DePra will serve as our team's project manager. Dan is a West Virginia registered Professional Engineer with more than 15 years of civil, environmental and project management experience. Dan resides in our Pittsburgh, PA office but recently successfully served as the project manager for the West Virginia Water Development Authority (WDA) and the Infrastructure and Jobs Development Council's (IJDC) comprehensive planning study for water, wastewater and stormwater for more than two years. This client has expressed complete satisfaction with Dan's project management services. Dan will be assisted by Mr. George J. (Joe) Crittenden. Joe resides in our Charleston, WV office and brings more than 35 years of civil and site design experience, including 10 years of experience with the AML program. Based on his local presence and related experience, Joe will assist Dan by addressing day-to-day project questions or issues.

The depth of our team's staff within the Charleston, WV, Morgantown, WV and Pittsburgh, PA offices as well as the combined diverse resources available within CDM Smith and HRG will enable our project management team to provide responsive and flexible service including input from the senior experts within our firms. We understand that the majority of work to be provided within a single assignment is to be completed with a small team of individuals that own the responsibility for providing deliverables in compliance with your standards in accordance with the approved scope, schedule and budget. However, as project assignments progress, we understand the value that our team's deep bench offers for the success of your program.

Project Budget Control

Direct responsibility for developing, monitoring, reporting and maintaining the project budget lies with the Project Manager. The Project Manager works closely with the project team and the client to develop a project budget commensurate with project scope of services. Once the project begins, the Project

Manager receives weekly reports of all incurred labor and direct/indirect expenses for the prior week and to date for the project. The Project Manager is required to maintain a project budget tracking spreadsheet, including an earned value analysis that makes sure that incurred budget aligns with completed scope. The Project Manager uses this tool to communicate budget status with the project team and immediately address any potential issues. The Project Manager often provides monthly scope and budget status to our clients in the form of a status report that accompanies the monthly invoice. If client approved modifications to the budget exist, the Project Manager is responsible for making the modifications and communicating them with the project team.

Project Schedule Control

Direct responsibility for developing, monitoring, reporting and maintaining the project schedule lies with the Project Manager. The Project Manager works closely with the project team and the client to develop a project schedule commensurate with project scope of services and any milestone requirements that the client may have on the project. Once the project begins, the Project Manager will evaluate the project schedule on a weekly basis to compare work progress with the current project schedule. This weekly evaluation, along with the weekly budget evaluation, will enable the Project Manager to work with the project team to keep the project on-track and identify project tasks that may require additional staff support. The Project Manager will regularly communicate the project schedule status with the client. Should the Project Manager and client agree that unforeseen circumstances require project schedule modification, the Project Manager is responsible for making the modifications to the satisfaction of the client and communicating the modification with the project team.

Quality Management

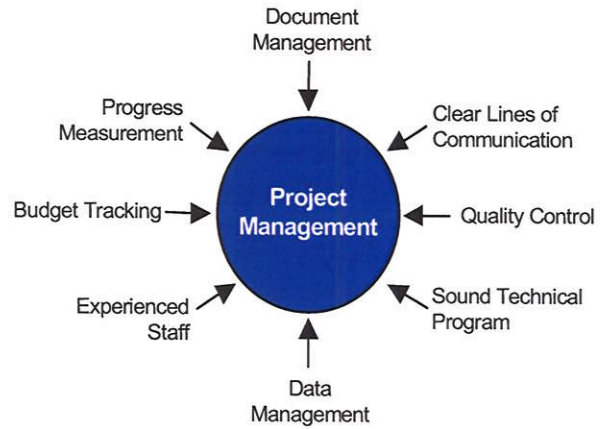
Quality management is an integral and mandatory component of each project undertaken by CDM Smith. The quality assurance (QA) component helps oversee and audit the quality of all work products. Quality control (QC) procedures, in turn, help monitor specific aspects of the project for consistency with established procedures and technical standards. The most important element of quality management is that project management instills a focus on quality by all team members in daily decisions and efforts. Quality management is a primary responsibility of the project manager.

CDM Smith's quality management procedures are detailed in its Quality Management Process Manual. CDM Smith's initial quality management step is the project kickoff workshop and the development of the project work plan that, as an integral component, specifies quality management activities, scheduled reviews, checking procedures, and responsibilities for their implementation.

Technical QA/QC reviews are described in detail in QMP and include the following activities:

- Department or functional discipline checking of computations, drawings, and outline specifications for technical accuracy and functional acceptability.
- Progress meetings with client personnel to review the status.
- "Sign-off" by task managers and project manager prior to submittals.
- "Sign-off" by CDM Smith QA officer that the above steps have been properly conducted prior to formal submittal of final work products.

To ensure the proper application of specialized engineering expertise for all clients, the firm makes use of its quality management procedures that includes creating a Technical Advisory Group. The quality management procedures provide for the preliminary and final review of all concepts, contract plans, layouts, and project reports, and provide for the issuing of internal memoranda which concern developing technologies. These procedures provide for the most up-to-date technical information from inside and outside the firm, and the maintenance of technical files for new products, processes, and construction techniques. In addition, these procedures provide for the involvement of specialists, as needed, to participate in the review of extraordinary or particularly challenging projects.



Elements of successful project management.

Location of Facilities

The Primary Office for this work is the CDM Smith Charleston, WV office located at Geary Plaza, Suite 210, 700 Washington Street, East, Charleston, WV 25301. Our proposed project team organization also includes additional design team and support services assistance located within our team's offices in Morgantown, WV and Pittsburgh, PA as well as additional senior advisor support staff from other offices. In fact our team offers a large number of staff within nearby offices to support WVDEP in the execution of its AML program. The adjacent figure identifies the locations of our team's nearby offices.

