



CONSULTANTS
• ENVIRONMENTAL
• GEOTECHNICAL
• MATERIALS
• FORENSICS

November 09, 2017

Tim Bagstad, P.E.
Project Engineer
Saint Paul Regional Water Services
1900 Rice St. N.
Saint Paul, Minnesota 55113

Subject: **Change Order for Environmental Compliance Services**
Saint Paul Regional Water Services
1900 Rice St. N., Saint Paul, Minnesota
AET Change Order No. 2
AET Project No. 03-06132

Dear Mr. Bagstad:

American Engineering Testing, Inc. (AET) is providing this detailed change order to Saint Paul Regional Water Services (SPRWS) for the services provided and work completed regarding the submittal requirements of a stipulation agreement with the Minnesota Pollution Control Agency (MPCA) for the McCarrons Water Treatment Rice Street facility.

PROJECT UNDERSTANDING

As part of a stipulation agreement with the MPCA, SPRWS submitted completed air emission inventory reports from 2004-2015, a Best Available Control Technology (BACT) analysis for the diesel generators, and an air permit application.

SCOPE OF SERVICES

The following activities or tasks were conducted in response to the stipulation agreement with the MPCA in addition to the original scope of services outlined in SPRWS Contract No. 577:

1. AET conducted air modeling and air permitting services that were not included in the original scope of work from January 01, 2017 through April 20, 2017. The services are described below:
 - a. AET responded to the MPCA comments regarding the NO_x BACT analysis (submitted July 2016) and amended the NO_x BACT analysis to reflect the comments.
 - b. AET developed and submitted a modeling protocol in anticipation of more refined modeling required by the MPCA.
 - c. During modeling protocol review process, the MPCA changed the key review person of the original modeling protocol that was submitted. Most of the accepted elements of the modeling protocol were not agreed upon by the new MPCA reviewer. The MPCA staff change led to many changes and revision in the modeling protocol.



- d. To clarify the MPCA modeling requirements, AET requested an in-person meeting with the MPCA head modeling supervisor, the new modeling protocol reviewer, and an air permitting staff member on April 03, 2017. This meeting brought the MPCA air modeling and air permitting staff in one room together to get exact answers and a clear path forward regarding SPRWS air modeling with regards to the air permitting requirements prior to the air permit submittal. This meeting resulted in a clear path forward and prevented us from going further down an expensive unnecessary path. AET followed up this meeting with a conference call with the MPCA on April 20, 2017.
2. Based upon the outcome of the April 03, 2017 meeting and April 20, 2017 conference call, AET conducted the following air modeling services after April 20, 2017:
 - a. AET completed the adjusted screen modeling based upon MPCA's recommendation and participated in additional discussions with the MPCA.
3. AET conducted air permitting services outside of the original scope of work by performing the following tasks regarding the original air permit application submitted June 28, 2017:
 - a. AET obtained information from manufacturer and additional information from the client for the air permit application based upon MPCA comments.
 - b. AET consulted with the MPCA on the best permitting approach for the space heaters at the facility, the Paint booth removal, and the lime handling process.

FEES

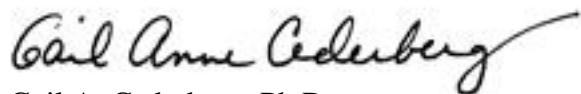
AET is requesting a contract adjustment of **\$19,354** above our revised contract maximum amount available (City of St. Paul Contract No. 577) for the completed scope of services listed above. AET's fees for the services listed above are billed on a Time and Materials basis according to the attached AET Fee Schedule and itemized in the attached Change Order No. 2 Fee Detail attached.

ACCEPTANCE

AET requests written acceptance of this Change Order in Acceptance box below.

Please indicate your acceptance of this Change Order by signing below and returning a copy to us. When you accept this proposal, you represent that you are authorized to accept on behalf of the Client.

Sincerely,
American Engineering Testing, Inc.



Gail A. Cederberg, Ph.D.
Principal, Environmental Services
651-659-1332
gcederberg@amengtest.com



Matthew DesJardins.
Senior Environmental Scientist
651-659-1313
mdesjardins@amengtest.com

Attachments:

Change Order No. 2 Fee Detail
2016 Fee Schedule

CHANGE ORDER ACCEPTANCE

Signature _____ Date _____

Typed/Printed Name _____

Company _____



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Contract Change Order No. 2

To: Mr. Tim Bagstad
Saint Paul Regional Water Services
1900 N Rice St.
St. Paul, MN 55113

Date: September 14, 2017

Project: Air Permitting and Air Modeling Services
AET Job No. 03-06132

American Engineering Testing, Inc., is submitting this Change Order for the following changes or additions to our work scope outlined in our proposal dated April 25, 2016.

CHANGE ORDER/OUT OF SCOPE DETAIL

1	Remaining balance of SPRWS Contract No. 577			\$2,783.75
2	Modeling/Permitting Services Provided 1/1/17 thru 4/20/17 BACT Analysis Response Modeling Protocol Development Refined Modeling and Modifications 4/3/17 On-site meeting with MPCA 4/20/17 MPCA conference call Modeling Protocol Revisions (due to change in MPCA staff)	65.00 hrs	\$153.00	\$9,945.00
3	Finish and Submit Air Permit Application Information request for air permit MPCA consultation	27.50 hrs	\$153.00	\$4,207.50
4	Modeling After 4/20/17 Verify and finalize screen modeling MPCA discussions	34.00 hrs	\$153.00	\$5,202.00

CONTRACT SUMMARY

Contract No. 577 (revised on 5/11/17) amount:	\$48,000.00
Remaining balance on revised (5/11/17) contract No. 577	\$2,783.75
Contract increase by this change order amount:	\$19,354.50
New contract amount, including this change order:	\$67,354.50

Authorized Signature

Date:

AET Project Manager

Date: 9/14/17

Please sign the original Contract Change Order and return to American Engineering Testing, Inc., Project Manager.





American Engineering Testing, Inc. 2016 Environmental Fee Schedule

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Engineering/Technical Personnel Rates

A. Administrative Assistant	\$66/hr
B. Engineering/Environmental Technician I	72/hr
C. Draftsperson	80/hr
D. Engineering/Environmental Technician II	85/hr
E. Drill Technician/Geotechnical Lab Technician	95/hr
F. Technician Level II CWI/ICBO	97/hr
G. Senior Engineering/Environmental Technician III	101/hr
H. Engineering Assistant	111/hr
I. Engineer I, Geologist I, Scientist I	120/hr
J. Senior Engineering Assistant	125/hr
K. Engineer II, Geologist II, Scientist II,	137/hr
L. Senior Engineer, Geologist, Scientist	153/hr
M. Principal Engineer, Geologist, Scientist	183/hr
N. Principal of Firm	197/hr
O. Litigation Preparation	255/hr
P. Deposition or Court Time (4-hour minimum)	325/hr

The rates presented are portal to portal, with vehicle mileage, expenses and equipment rentals being additional. Reduced rates may be negotiated for long-term projects.

Overtime for personnel charged at above cost plus 25% for over 8 hours per day, nights, or Saturday; and at above cost plus 50% for Sundays or Holidays. Night time shift work will include a premium charge of \$30.00 per person per shift.

Vehicle Mileage (personnel time and rental extra)

A. Personal Automobile/Truck	\$.75/mi
B. ½ or ¾-ton Auxiliary Truck/Van	1.00/mi
C. Truck with Coring Equipment	1.10/mi
D. 1 or 2-ton Rig Auxiliary Truck	1.15/mi
E. Truck with Warning Sign/Crash Trailer	1.20/mi
F. 1-ton Truck with Drill Rig	1.20/mi
G. 1½ to 2½-ton Truck with Drill Rig	1.35/mi
H. 20-Ton CPT Truck Rig	1.60/mi
I. Tractor/Lowboy Trailer	1.80/mi

Site Exploration Equipment Rental/Services

A. Drill Rig Rental	
1. Rotary Drill on 4WD 1-ton Truck	\$72/hr
2. Rotary Drill on 2WD 1½ to 2½-ton Truck	82/hr
3. Rotary Drill on 4WD 1½ to 2½-ton Truck	84/hr
4. Rotary Drill on All-Terrain Vehicle	112/hr
5. Portable, Non-rotary Rig	82/hr
B. Rig Auxiliary/Specialty Vehicle Rental	
1. Trailer	8.5/hr
2. ¾-ton Truck	17.50/hr
3. 1-ton or 2-ton Truck	22.50/hr
4. Truck with Warning Sign/Crash Trailer	29/hr
5. Truck with Coring Equipment	45/hr
C. Cone (CPT) Rig/Equipment Rental	
1. 20-Ton CPT Rig, Truck or ATV	\$145/hr
2. Electronic Cone or Piezocone w/computer	43/hr

4. Soil Sampler	4/hr
5. Water Sampler	20.50/hr
D. Pavement Testing Equipment Rental	
1. Falling Weight Deflectometer, including Truck	150/hr
2. Light Weight Deflectometer	56/hr
E. Geotechnical Equipment Rental	
1. Field Vane Shear	325/day
2. Inclinator Reading Equipment	335/day
3. Pneumatic Transducer Reading Equipment (pore pressure, settlement or earth pressure)	175/day
4. Bore Hole Permeability	
a) Open End Casing Method	135/day
b) HQ Wireline Packer	330/day
5. Borehole Pressuremeter	70/hr
6. Iowa Borehole Shear Tester	335/day
7. Double Ring Infiltrometer	265/day
8. GPS Mapping System Equipment	15.50/hr
9. Pile Driving Analyzer (PDA)	750/day
10. Calibrated SPT Rod	225/day
11. Field Electrical Resistivity Equipment (Wenner 4-Pin)	250/day
12. Field Seismic Refraction Equipment (ReMi)	425/day
F. Geotechnical Software Rental	
1. Finite Element (seepage or soil deformation)	60/hr
2. CAPWAP	35/hr
3. Wave Equation (WEAP)	20/hr
4. LPILE or Group	20/hr
5. Slope Stability (ReSSA)	20/hr
6. Stabilized Earth Slopes and Walls	20/hr
7. Settlement (FoSSA)	20/hr
8. SHAFT	20/hr
G. Bit Wear	
1. Diamond Bit - Sedimentary Rock	
a) B, NQ	10.50/ft
b) HQ	12.50/ft
2. Diamond Bit - Metamorphic and Igneous	
a) B, NQ	17.50/ft
b) HQ	20.50/ft

Water and Wastewater Monitoring Equipment Rental

A. ISCO Autosampler	\$55/day
B. Refrigerated ISCO Autosampler	100/day
C. Liquid Level Recorder	50/day
D. Flow Meter	85/day
E. Confined Entry Equipment	140/day
F. Weir Materials	40/day
G. Recording pH Meter	45/day
H. Kemmerer Type Sampler	45/day
I. Chlorine Residual Meter	45/day
J. DR2000 Spectrophotometer	85/day
K. Ice Auger	50/day



American Engineering Testing, Inc. 2016 Environmental Fee Schedule

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Groundwater Monitoring Equipment Rental

A. Dissolved Oxygen Meter	\$50/day
B. pH Meter	25/day
C. Conductivity Meter	25/day
D. Redox Potential Meter	25/day
E. Bailers-Polypropylene	15/ea
F. Bailers-Teflon	30/ea
G. Groundwater Modeling Software	25/hr
H. Water Level Probe	50/day
I. Oil-Water Interface Sensor	90/day
J. Well Rate of Recovery Equipment	150/day
K. 2" Pump Assembly	110/day
L. Peristaltic Assembly	60/day
M. YSI Multi-Parameter Meter	120/day
N. Turbidity Meter	25/day
O. Groundwater Filter – Nalgene	20/ea
P. HydroPunch	250/day

Soil Sampling and Support Equipment Rental

A. Direct Push Sampling System (Geoprobe 7)	\$95/hr
B. XRF Analyzer	550/day
C. Soil Auger Assembly	50/day
D. Power Auger	65/day
E. Hammer Drill, small	25/day
F. Site Trailer	85/day
G. Level A, B, or C Protective Gear	quoted per job
H. Vacuum Blower	quoted per job
I. ColiWassa Sampler	15/ea
J. Steam Cleaning Service (includes rental)	
1. Drill Rig/Tools	315/clean
2. Down Hole Drill Tools Only	210/clean
K. Steam Cleaner	140/day
L. Portable Generator (220 volt)	25/day
M. Magnetic Locator	25/day

Air Monitoring Equipment Rental

A. Photoionization Detector	\$115/day
B. Flame Ionization Detector	quoted per job
C. LEL Meter	100/day
D. Landtec Methane Meter	175/day
E. Gas Meter (LEL, O ₂ , H ₂ S, CO)	115/day
F. Methane Meter	100/day
G. Air Velocity Meter	100/day
H. Air Flow Measurement Instrumentation	100/day
I. EPA Method 25 Analyzer	375/day
J. Impinger/Meter Console Assembly	250/day
K. EPA Method 3A Analyzers	325/day
L. EPA Method 5/17 Sampling Train	425/day
M. EPA Method 201A Sampling Train	425/day
N. EPA Method 23 Sampling Train	550/day
O. EPA Method 26A Sampling Train	325/day
P. EPA Method 29 Sampling Train	550/day
Q. Vacuum Sampler Assembly	100/day
R. Heated Sample Line Assembly	150/day

S. Orsat Analyzer	100/day
T. 40L Tedlar Bag	35/ea
U. Three-Dimensional Pitot Tube Assembly	200/day
V. EPA Method 6C Analyzer	325/day
W. EPA Method 7E Analyzer	325/day
X. EPA Method 10 Analyzer	325/day
Y. Sample Gas Conditioner	100/day
Z. Extractive FTIR Analyzer	3000/week
AA. Gas Chromatograph	quoted per job

Expenses

Direct Project Expenses:

includes out-of-town per diem; plowing and towing; special equipment, materials and supplies; special travel, transportation and freight; subcontracted services, and miscellaneous costs
Cost + 15%

Equipment Replacement –

(when abandonment is more feasible than recovery) Cost

Equipment Recovery –

(when required by regulatory agencies or project specifications) Cost + 15%

Clerical/Drafting Services and Rentals

A. Report Reproduction	
1. Minimum (copying additional)	50/report
2. Copying	.35/sheet
B. Computer and Software Rental (personnel time extra)	
1. AutoCAD or Microstation	25/hr
2. CADD Plotting	1.00/sq.ft.
3. Air Dispersion Modeling	25/hr
4. Ground Water Modeling	25/hr
C. Digital Camera/Photographs	
1. Camera Rental	25/day
2. Color Photographs	1.50/page
D. Direct Project Expenses	Cost + 15%

A minimum charge of \$100.00 per job may be assessed to cover administrative costs.