

**MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION**

In the Matter of:	)	
	)	
AA QUARRY LLC	)	
AA Quarry Site # 2462	)	
Johnson County, Missouri,	)	
New Site Permit Application	)	
	)	
DAVID EARLS, et al,	)	Proceeding Under
	)	The Land Reclamation Act
<i>Petitioners Pro Se,</i>	)	§§ 444.760 - 444.789, RSMo
	)	
v.	)	Permit #1094
	)	
DEPT. OF NATURAL RESOURCES,	)	
KEVIN MOHAMMADI, Staff Director,	)	
Land Reclamation Program,	)	
Division of Environmental Quality,	)	
	)	
<i>Respondent,</i>	)	
	)	
AA QUARRY LLC,	)	
	)	
<i>Applicant.</i>	)	

**APPLICANT'S RESPONSE TO ORDER**  
**ON PREPARATION FOR PRE-HEARING CONFERENCE**

1. Proposed Uncontested Material Facts
  - A. Applicant will stipulate as undisputed the facts stated in the Land Reclamation Program files relative to Applicant's Permit Application for Industrial Minerals.
  - B. Applicant will stipulate as undisputed the facts stated in the Department of Natural Resources file for the formal action of the Land Reclamation Commission to order this hearing.
  
2. Expert Witnesses

The following expert witnesses may be presented either as part of Applicant's case in chief or in defense or rebuttal of Petitioner's case in chief.

- A. Tia Jeter, P.E.  
Senior Project Engineer  
SCS Aqua Terra Environmental Solutions, Inc.  
7311 W. 130th Street, Suite 100  
Overland Park, KS 66213  
913 681-0030

Ms. Jeter may be called upon to testify regarding her work on the Application for Authority to Construct submitted to the DNR Air Pollution Control Program by Applicant and, specifically, conditions of the issued permit, including required emission controls, facility monitoring requirements, and how the permit was issued to protect the National Ambient Air Quality Standards set by the Environmental Protection Agency to protect public health and the environment.

Ms. Jeter's CV is attached. Her hourly rate for deposition testimony is \$135.00 per hour.

Applicant reserves the right to expand Ms. Jeter's scope of testimony in rebuttal of any expert testimony presented by Petitioner.

- B. Nathan Hamm, P.E.  
Vice President/Senior Project Advisor  
SCS Aqua Terra Environmental Solutions, Inc.  
7311 W. 130th Street, Suite 100  
Overland Park, KS 66213  
913 681-0030

Mr. Hamm may be called to testify regarding his work relative to Applicant's Application for a U.S. Army Corps of Engineers 404 Permit, the services provided by his firm, including the preparation of the Application for Permit documents including calculation of jurisdictional stream impact debits and credits and proposed on-site stream restoration activities.

Mr. Hamm's CV is attached. Mr. Hamm's hourly rate for deposition testimony is \$185.00 per hour.

Applicant reserves the right to expand Mr. Hamm's scope of testimony in rebuttal of any expert testimony presented by Petitioner.

- C. David W. Dressler, CEA  
Director, Consulting Engineering Services  
Dressler Consulting Engineers, a Terracon company  
13910 W. 96th Terrace  
Lenexa, KS 66215  
913 492-7777

Mr. Dressler may be called upon to testify relative to blasting cause and effect, blasting vibrations and blast monitoring, Missouri Safety Blasting Act and requirements, and pre-blast surveys.

Mr. Dressler's CV is attached. His hourly rate for deposition testimony is \$190.00 per hour.

Applicant reserves the right to expand Mr. Dressler's scope of testimony in rebuttal of any expert testimony presented by Petitioner.

D. Ann R. McReynolds  
McReynolds Realty Advisors, LLC  
345 Marshall Avenue, Suite 202  
St. Louis, MO 63119  
314 961-9560

Ms. McReynolds may be called to present testimony relating to several market studies that she has completed regarding real estate values in the proximity of a quarry operation; and possibly present specific testimony and opinions regarding the anticipated effect of Applicant's operation on the value of real estate adjacent and neighboring to the quarry site.

Ms. McReynolds' CV is attached. Her hourly rate for deposition testimony is \$200 per hour.

Applicant reserves the right to expand Ms. McReynolds' scope of testimony in rebuttal of any expert testimony presented by Petitioner.

### 3. Lay Witnesses

Applicant reserves the right to call any and all of the following identified lay witnesses either as part of Applicant's case in chief or in rebuttal of Petitioner's case.

#### Applicant

Robert Radmacher  
AA Quarry, LLC  
2201 N. 7 Highway, Suite B  
Pleasant Hill, MO 64080

Tom Radmacher  
AA Quarry, LLC  
2201 N. 7 Highway, Suite B  
Pleasant Hill, MO 64080

Brian Yeager, Staff Engineer  
Radmacher Brothers Excavating Company  
2201 N. 7 Highway, Suite B  
Pleasant Hill, MO 64080

DNR Water Pollution Program

Andrea Collier, P.E.  
Missouri Department of Natural Resources  
Regional Director  
500 N.E. Coburn Road  
Lee's Summit, MO 64086-4710

Patrick Peltz  
Missouri Department of Natural Resources Regional Office  
500 N.E. Coburn Road  
Lee's Summit, MO 64086-4710

Jimmy Coles  
Missouri Department of Natural Resources  
Unit Chief, Watershed and Outreach  
Kansas City Regional Office  
500 N.E. Coburn Road  
Lee's Summit, MO 64086-4710

Dam Safety

Robert A. Clay, P.E.  
Missouri Department of Natural Resources  
Water Resources Program  
111 Fairgrounds Road  
Rolla, MO 65401  
573 368-2177

DNR Land Reclamation Program

Kevin Mohammadi  
Missouri Department of Natural Resources  
Land Reclamation Program  
Program Director  
P.O. Box 176  
Jefferson City, MO 65102  
573 751-1740

William Zeaman  
Missouri Department of Natural Resources  
Land Reclamation Program  
Chief, Non-Coal Unit  
P.O. Box 176  
Jefferson City, MO 65102  
573 751-1312

Tucker Fredrickson  
Missouri Department of Natural Resources  
Land Reclamation Program  
Environmental Specialist  
P.O. Box 176  
Jefferson City, MO 65102  
573 522-2587

DNR Air Pollution Program

Kyra Moore  
Director, Air Pollution Program  
Missouri Department of Natural Resources  
P.O. Box 176  
Jefferson City, MO 65102

Susan Heckenkamp  
New Source Review Unit Chief  
Missouri Department of Natural Resources  
Air Pollution Control Program  
P.O. Box 176  
Jefferson City, MO 65102

James Helgason  
Environmental Manager  
Air Pollution Control Program  
Missouri Department of Natural Resources  
Kansas City Regional Office  
500 Coburn Road  
Lee's Summit, MO 64086

Kathy Kolb  
Missouri Department of Natural Resources

Kendall Hale  
Missouri Department of Natural Resources  
Air Pollution Program  
New Source Review Permit Section Chief  
P.O. Box 176  
Jefferson City, MO 65102

U.S. Corps of Engineers 404 Permit

David R. Hibbs  
U.S. Army Corps of Engineers  
Regulatory Program Manager, Operations Division  
Kansas City District Office  
601 E. 12th Street, Room #843  
Kansas City, MO 64106  
816 384-3131

Michael T. McFadden  
Regulatory Project Manager  
Department of the Army  
Kansas City District Corps of Engineers  
635 Federal Building  
601 E. 12th Street  
Kansas City, MO 64106-2824

Missouri Department of Transportation

Mike McGrath  
Missouri Department of Transportation  
Area Engineer, District 4  
1593 W. Arrow Street  
Marshall, MO 65340

Brian Kidwell  
Missouri Department of Transportation  
Assistant District Engineer  
or designated representative by subpoena

All witnesses listed by Petitioner.

All witnesses listed by Respondent Missouri Department of Natural Resources.

Applicant reserves the right to endorse additional witnesses in rebuttal of Petitioner's case.

4. Applicant believes that Applicant's evidence might take two to three days trial time but that estimate is highly dependent upon the scope and length of Petitioners' evidence and the issues to be addressed in the hearing.
5. Applicant suggests a minimum 90-day discovery period subject to possible extension depending upon the length and breadth of Petitioners' witness and exhibit list and designation of experts that may be required for rebuttal.
6. Applicant's Proposed Exhibits

1. July 6, 2012 Missouri State Operating Permit; Missouri General Operating Permit
2. July 6, 2012 Storm Water Pollution Prevention Plan for "Borrow Site"
3. July 20, 2012 AA Quarry LLC Articles of Organization
4. July 20, 2012 AA Quarry, LLC Operating Agreement
5. November 16, 2012 Permit Application for Industrial Mineral Mines
6. December 11, 2012 Department of Natural Resources letter to AA Quarry, LLC (deems application complete)
7. Notice to Johnson County, Missouri Commission
8. Affidavit of Publication/Newspaper
9. December 14, 2012 Department of Natural Resources letter to Robert Radmacher regarding Water Pollution Compliance Inspection (11/28/12) for Missouri State Operating Permit (7/6/12) for borrow site
10. Department of Natural Resources Compliance Report (By Patrick Peltz) of Department of Natural Resources compliance inspection conducted 11/28/12
11. December 19, 2012 Letter from Tia Jeter, P.E., Sr. Program Manager, Aqua Terra Environmental Solutions, Inc., to Susan Heckenkamp, Missouri Department of Natural Resources Air Pollution Program together with attachments:
  - a. Application for Authority to Construct
  - b. Site location map; site layout
  - c. Estimated quarry time line

- d. Missouri Department of Natural Resources -APCP quarry spreadsheet (9)
  - e. Pre Construction Prohibition Waiver Request
12. January 17, 2013 Letter from Kyra Moore, Department of Natural Resources Pollution Control Program, to Robert Radmacher regarding authority to construct (rock crusher, grizzly, screens and conveyors) (storage piles and associated haul roads)
  13. January 22, 2013 Department of Natural Resources letter from Kevin Mohammadi, Land Reclamation Commission Program Director, to Robert Radmacher regarding public meeting
  14. January 30, 2013 Department of Natural Resources Letter, Andrea D. Collier, P.E., Regional Director, Department of Natural Resources, to Robert Radmacher regarding Public Notice for Proposed State Operating Permit (Permit for Industrial Mineral Mines) (Request for Public Comments) with attached Public Notice, "Draft" Missouri State Operating Permit (General Permit)
  15. March 7, 2013 Minutes of Public Hearing
  16. March 13, 2013 Letter from Department of Natural Resources, John Madras, Director Water Protection Program
  17. April 2, 2013 Department of Natural Resources letter from Rucker Fredrickson to Proposed Petitioners in response to letters from proposed petitioners expressing "concern" regarding Request for Public Hearing Land Reclamation meeting May 23, 2013 together with enclosure, April 2, 2013 Staff Directors Notice of Recommendations (Under Land Reclamation Act)
  18. April 30, 2013 Department of Natural Resources letter from Kevin Mohammedi regarding notice of Land Reclamation Commission meeting 5/23/13 and request for public hearing
  19. May 15, 2013 Letter from Robert A. Clay, P.E., Department of Natural Resources - Dam Safety, to Robert Radmacher
  20. July 22, 2013 Letter from Department of Natural Resources, Susan Heckenkamp, New Source Review Unit Chief Air Pollution Control Program, to Robert Radmacher

21. "Draft" Application for Department of Army (404) Permit (4/19/13)
22. Application for Department of Army (404) Permit (6/6/13)
23. Missouri Department of Natural Resources review files for Land Reclamation Program, Air Pollution Control Program and Water Pollution Control Program
24. All exhibits listed by Respondent Department of Natural Resources
25. All documents relied upon by any expert witness called by AA Quarry, LLC to support opinions and conclusions
26. All exhibits listed by Petitioners

Respectfully submitted,

**BROWN & RUPRECHT, P.C.**

By /s/ G. Steven Ruprecht

G. Steven Ruprecht  
911 Main Street, Suite 2300  
Kansas City, MO 64105-5319  
(816) 292-7000 Telephone  
(816) 292-7050 Facsimile  
sruprecht@brlawkc.com  
Attorneys for Applicant AA Quarry, LLC

Certification of Service

I hereby certify a copy of foregoing has been sent via email this 23rd day of August, 2013, to:

W. B. Tichenor, DNR, Hearing Officer  
[wbtichenor@gmail.com](mailto:wbtichenor@gmail.com)

Timothy P. Duggan, Assistant Attorney General  
Daren Eppley, Assistant Attorney General  
PO Box 899  
Jefferson City, MO 65102  
[tim.duggan@ago.mo.gov](mailto:tim.duggan@ago.mo.gov)  
[daren.eppley@ago.mo.gov](mailto:daren.eppley@ago.mo.gov)  
Attorney for Respondent

DNR-LRC Staff:

Kevin Mohammadi, Staff Director, LRP, Respondent: [Kevin.Mohammadi@dnr.mo.gov](mailto:Kevin.Mohammadi@dnr.mo.gov)  
Lauren Cole, Program & Commission Secretary: [lauren.cole@dnr.mo.gov](mailto:lauren.cole@dnr.mo.gov)

Petitioners:

David L. Zeiler  
Zeiler Law Firm, LC  
2012 NW South Outer Road  
Blue Springs, MO 64014  
[dzeiler@zeilerlawfirm.net](mailto:dzeiler@zeilerlawfirm.net)  
Attorney for Petitioners

/s/ G. Steven Ruprecht  
G. Steven Ruprecht, Attorney for Applicant  
AA Quarry, LLC

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TIA JETER, P.E.

**Education**

M.S. Environmental Engineering, University of Kansas - Lawrence, 2004  
B.S. Chemical Engineering, University of Kansas - Lawrence, 2001

**Professional Licenses**

Professional Engineer  
Kansas  
Missouri  
Iowa  
Indiana

**Professional Experience**

Tia Jeter is a registered Professional Engineer in the state of Kansas, Missouri, Iowa and Indiana. She currently holds the position of Senior Project Manager at SCS Aquaterra. Her project experience includes process engineering, ambient air dispersion modeling analysis, New Source Performance Standard (NSPS) compliance, Prevention of Significant Deterioration (PSD) applicability and analysis, air planning and permitting, environmental auditing and reporting, landfill gas control system planning, environmental compliance field activities, and groundwater monitoring reporting.

Example project experience includes:

**Air**

**Air Permitting, Sabine River Works, Ethylene Unit – DuPont:** Ms. Jeter served as the Environmental Coordinator for the ethylene unit at Sabine River Works DuPont site. One of her responsibilities was to oversee the preparation and finalization of the unit's Title V permit. This included review of draft permits, compliance plan development, and permit finalization. Ms. Jeter was responsible for the preparation of the New Source Review (NSR) permit renewal. Her responsibilities also required development and submittal of various construction permits/permits by rule for frequent design changes made to the Ethylene Unit.

**Hydrogen Utilization Project, Sabine River Works, Ethylene Unit – DuPont:** Ms. Jeter served as the environmental engineer of a project to use byproduct hydrogen as an additional fuel source for a unit flare and steam super-heater. Her responsibilities included submitting a standard permit for the pollution project, calculating the potential emissions of the project and coordinating stack testing of the applicable emission units.

**Point Source Modeling, Omaha Steel Castings:** Ms. Jeter conducted the air dispersion modeling analysis, utilizing AERMOD, for the construction of a steel foundry in Nebraska. Her initial responsibility required development of a modeling protocol for submittal and approval by the Nebraska Department of Environmental Quality (NDEQ). Following approval of the

modeling protocol, Ms. Jeter conducted the dispersion modeling analysis for the pollutants which exceeded the Prevention of Signification Deterioration Significant Levels; this included dispersion modeling for emissions of particulate matter less than 10 microns in diameter (PM<sub>10</sub>) and particulate matter less than 2.5 microns in diameter (PM<sub>2.5</sub>). Ms. Jeter performed a screening analysis to determine if the impacts from the proposed facility were significant. Based on the results of the screening analysis, Ms. Jeter conducted a full impact analysis incorporating emissions from nearby facilities to evaluate compliance with the applicable National Ambient Air Quality Standards (NAAQS) averaging standards. The results of the full impact analysis indicated changes to the proposed facility, such as additional emissions controls, were required for the installation to comply with the NAAQS. Ms. Jeter assisted in the identification of the required controls.

**Non-Point Source Modeling, Bluff Road Landfill:** Ms. Jeter performed the air dispersion modeling for particulate matter emissions being produced at the facility in order to determine compliance with NAAQS. Ms. Jeter utilized the modeling program Industrial Source Complex Short Term (ISCST3), to predict the emissions resulting from multiple area and volume sources on the facility. Ms. Jeter conducted an analysis of various options to reduce particulate matter generated at the facility including operational and equipment modifications. Based on the evaluation and subsequent modeling performed, the facility was presented with multiple options of varying cost and scope that would bring the facility into compliance with the NAAQS. Following submittal of the compliance plan, the facility was required by the regulatory agency to reevaluate the modeling utilizing AERMOD. As such, Ms. Jeter modeled the facility emissions utilizing AERMOD and developed a new compliance plan based on the new results.

**Title V Permit Modification, Wheatland Landfill:** Ms. Jeter performed modeling of the fugitive emissions from the landfill, with the use of Landfill Gas Emissions Model (LANDGEM), which demonstrated that the facility is not currently and will not in the future be required to operate and control their gas system in compliance with NSPS requirements. Therefore, Ms. Jeter prepared a Title V permit modification requesting the removal of NSPS gas collection and control system requirements from the permit for the facility.

**Soybean Processing and Biodiesel Facility Permitting – Prairie Pride:** Ms. Jeter assisted with the permit applicability determination and subsequent construction permit submittal for a new soybean processing facility. The initial phase of the project included a PSD determination with the preliminary pre-construction monitoring protocol analysis. Ms. Jeter performed the emissions calculations and dispersion modeling required to show compliance with the National Ambient Air Quality Standards (NAAQS) and the increment analysis. Her participation also included preparation of permit drawings and assistance with the construction application development.

**Title V Permit Application and Compliance Assistance, Lee's Summit Resource Recovery Park :** Ms. Jeter provides numerous services to the Lee's Summit Resource Recovery Park (RRP), including air compliance assistance. As part of these services, Ms. Jeter identified an error in the NSPS Subpart WWW applicability that had been conducted by a previous consultant. Following an explanation of the previous oversight and potential consequences to the Lee's Summit RRP, Ms. Jeter contacted the Missouri Department of Natural Resources to explain the

compliance history of the facility and propose a compliance plan and timeline to correct the error. As part of the compliance plan, Ms. Jeter managed the completion of Tier 2 testing at the facility and completed and submitted the initial Title V permit application. She assisted the facility with review and comment on the draft permit. Upon issuance of the final permit, Ms. Jeter provided the facility an overview of the monitoring and reporting requirements. She continues to work with the Lee's Summit RRP on preparation and submittal of the requisite air compliance reports.

**Prevention of Significant Deterioration (PSD) Permitting – American Energy Producers, Inc.:** Ms. Jeter assisted with the PSD permit application for this greenfield soybean extraction and biodiesel production facility. Tia completed the dispersion modeling analysis for emissions of particulate matter less than ten microns (PM<sub>10</sub>). The analysis included calculating the potential emissions of the facility and performing dispersion modeling utilizing the modeling program Industrial Source Complex Short Term (ISCST3) to evaluate the proposed project's compliance with the NAAQS and increment standard. Ms. Jeter worked closely with the team members on her project throughout the duration of the project to complete the submission of a PSD permit application in a relatively short period of time.

**Dispersion Modeling – Ray-Carroll County Grain Growers, Inc./Show-Me Ethanol, LLC:** Ms. Jeter performed the dispersion modeling analysis for this combined plant that was required to obtain the minor source permit for construction of a 60.5 million gallon ethanol plant. Ms. Jeter worked closely with her team members to evaluate different modeling scenarios based on the facets of each plant's operations to determine operating parameters that would allow sufficient freedom in day-to-day operations while simultaneously demonstrating compliance with the National Ambient Air Quality Standards (NAAQS) and increment consumption for PM<sub>10</sub> emitted from the site. Following obtainment of the initial construction permit, Ms. Jeter re-evaluated the modeling exercise as part of an evaluation of options to decrease the level of restrictions on plant operations while maintaining a compliant modeling exercise. A permit modification was subsequently obtained that incorporated these decreased limitations.

**Construction Permit, Prairie View Regional Waste Facility and Lamar Sanitary Landfill:** Ms. Jeter prepared the construction permit application for a vertical expansion and the installation of two flares at the waste facilities. This included applicability determination for federal and state requirements and point source modeling with the use of SCREEN3 to determine possible impacts to the ambient air quality. Ms. Jeter also performed a landfill gas evaluation using results of gas sampling performed at the facility to determine the potential value of the landfill gas as an alternative fuel source.

**Construction and Operating Permit Modification, Southeast Landfill:** Ms. Jeter prepared a request for modification of the construction permit that had been submitted for the installation of the landfill gas flare. It was requested to permit the maximum potential of the flare in place of the potential gas production of the landfill. It was proposed to incorporate the amended construction permit into the operating permit for the facility.

**Off-Permit Change and Application to Construct, Jefferson City Landfill:** Ms. Jeter prepared and submitted the construction permit application for a landfill flare as well as a request

for an off-permit change for the facility Title V permit. Included in the construction permit request was an applicability determination for federal and state requirements and point source modeling with the use of SCREEN3 to determine possible impacts to the ambient air quality. The requested off-permit change proposed the removal of a site specific monitoring requirement, which Ms. Jeter was able to show through historic records and emissions calculations, was not longer warranted.

**Title V Permit Renewal, Prairie View Regional Waste Facility and Lamar Sanitary Landfill:** Ms. Jeter prepared and submitted the Title V permit renewal application for the facility. This required evaluating all emission sources on site to determine applicability to permitting and regulatory requirements. Ms. Jeter performed the required emissions calculations and prepared all forms and the engineering report necessary to submit a technically complete renewal application.

**Preconstruction Modeling – American Energy Producers:** Ms. Jeter conducting the preliminary air dispersion modeling based on the emissions from a similar sized facility. The results of the modeling were used to determine the appropriate location for placement of preconstruction monitors that were required as part of the Prevention of Significant Deterioration (PSD) construction permitting process.

**Modeling Services, Engineering Automation & Design:** Ms. Jeter conducted the air dispersion modeling analysis, utilizing AERMOD, for the construction of a biodiesel facility in Iowa. Her responsibilities included completing an air modeling analysis report for all pollutants which exceeded the Prevention of Signification Deterioration Significant Levels. Ms. Jeter performed dispersion modeling for emissions of nitrogen oxides and particulate matter to demonstrate that the proposed facility would be in compliance with all applicable NAAQS averaging standards. The model analysis report and modeling files were submitted to the Iowa Department of Natural Resources where they were reviewed and approved.

**Air Services, American Environmental Landfill:** Ms. Jeter has provided various air services to the landfill located near Sand Springs, Oklahoma. As part of the services provided, Ms. Jeter reviewed a version of the Title V permit that the Oklahoma Department of Environmental Quality had drafted prior to going to public notice. Ms. Jeter coordinated directly with personnel at the air quality division of the ODEQ regarding changes and updates to the permit as a final review process. Additionally, Ms. Jeter has provided general air compliance assistance services to the landfill including submittal of annual emission inventories, preparation of compliance reports, development of a greenhouse gas monitoring plan, and submittal of annual greenhouse gas reports.

**Air Services, Montauk Energy:** Ms. Jeter prepared the construction permit application for a the installation of a flare at the American Environmental Landfill on behalf of Montauk Energy who operates a landfill gas to energy project at the facility. This included the calculation of potential emissions for the project and determination of applicability to federal and state requirements.

**Emission Inventory Questionnaire (EIQ):** Ms. Jeter prepared the EIQs for the DuPont ethylene unit and multiple landfills within Missouri, Kansas and Oklahoma, including several

Allied Waste Landfills and the Lee's Summit Sanitary Landfill. Ms. Jeter utilized MOEIS, the online Missouri Emissions Inventory System, to submit several of the landfill's EIQs electronically.

**Greenhouse Gas Reporting** – Ms. Jeter has provided engineered services related to compliance with the Greenhouse Gas (GHG) Reporting rule for numerous facilities, including landfills and chemical processing plants. Her services have included GHG applicability determinations, development of GHG monitoring plans, collection of required data for GHG reporting, development of reports, and submittal of information through the EPA's electronic GHG reporting tool, e-GGRT.

### **Environmental**

**Compliance, Sabine River Works, Ethylene Unit – DuPont:** Ms. Jeter was responsible for assuring that the ethylene unit maintained compliance with all applicable requirements. Her responsibilities included conducting the required environmental recordkeeping and reporting, performing monthly environmental audits, and managing notifications of environmental incidents to the appropriate regulatory agency. Additionally, Ms. Jeter was responsible for coordinating the fugitive emissions monitoring program which included managing the contractors who performed the monitoring and ensuring that all monitoring and maintenance activities were performed within the required timelines.

**Control Device Performance Testing, Sabine River Works, Ethylene Unit – DuPont:** Ms. Jeter was responsible for coordinating and overseeing the performance testing of a boiler that was also used as a control device. Her participation required managing the stack testing, coordinating with the operators to maintain the required process rates, and submitting the compliance demonstration report to the regulatory agency.

**Fugitive Emissions Monitoring Program, Sabine River Works, Ethylene Unit – DuPont:** Ms. Jeter was responsible for coordinating the fugitive emissions monitoring program for the ethylene unit. Her responsibilities included managing the contractors that were attained to perform the monitoring, ensure that the required monitoring and repair efforts were conducted within the required time frame and submitting all reports as required by the applicable permit.

## SCS AQUATERRA

### 2013 STANDARD FEE SCHEDULE

<b>Labor Category</b>	<b>Rate</b>
Senior Project Director .....	\$200
Senior Project Advisor .....	\$180
Project Director .....	\$165
Project Advisor .....	\$155
Senior Project Manager .....	\$145
Project Manager .....	\$135
Senior Project Professional .....	\$125
Project Professional .....	\$110
Staff Professional .....	\$90
Associate Professional.....	\$80
Designer.....	\$75
CADD/Graphics .....	\$65
Senior Technician.....	\$75
Technician .....	\$60
Project Administrator .....	\$75
Administrative Assistant .....	\$55

#### General Terms:

1. Rates for expert witness including depositions and time in court will be at 1.75 times the listed rates.
2. Schedule rates are effective through December 31, 2013. Work performed thereafter is subject to a new Fee Schedule.
3. Schedule labor rates include overhead and profit on labor. Costs for sub-consultants, sub-contractors, job-related employee travel and subsistence, equipment, supplies, and other direct costs are billed at cost plus a 15 percent.
4. A communication fee of 1 percent of project labor will be charged for telephone, copying, postage, IT, and similar project production costs.
5. Invoices will be prepared monthly or more frequently for work in progress unless otherwise agreed. Invoices are due and payable upon receipt. Invoices not paid within 30 days are subject to a service charge of 1.5 percent per month on the unpaid balance.
6. Payment of SCS invoices for services performed will not be contingent upon the client's receipt of payment from other parties, unless otherwise agreed in writing. Client agrees to pay legal costs, including attorney's fees, incurred by SCS Aquaterra in collecting any amounts past due and owing on client's account.



# SCS AQUATERRA

## 2013 STANDARD FEE SCHEDULE

### Printing Services

24-inch by 36-inch plots .....	\$25.00 each
36-inch by 48-inch plots .....	\$25.00 each
Additional Report Copies (varies depending on report) .....	\$25.00 - \$50.00 per report

### Support Vehicles

Support Vehicle .....	\$0.70 per mile
SCS Aquaterra Support Truck .....	\$40.00 per day plus \$0.70 per mile
SCS Aquaterra Support Truck with Trailer .....	\$60.00 per day plus \$0.85 per mile
SCS Aquaterra Utility Truck .....	\$60.00 per day plus \$0.70 per mile
Rental Vehicle.....	Cost plus 15%

### Per Diem and Travel

Hotel, Airfare .....	Cost plus 15%
Full-Day Meal Allowance.....	\$46.00 per day
Half-Day Meal Allowance .....	\$23.00 per day

### Field Equipment and Supplies

Track-mounted Geoprobe® .....	\$750.00 per day
All Terrain Vehicle (ATV/UTV) .....	\$100.00 per day
Field Sampling Trailer .....	\$350.00 per day
GPS Surveying System .....	\$225.00 per day
Total Station Survey Equipment.....	\$120.00 per day
Misc. Survey Tools/Equipment .....	\$10.00 per day
Nuclear Density Gauge .....	\$100.00 per day
Photoionization Detector (PID) .....	\$100.00 per day
Water Level Indicator (≤300 foot).....	\$30.00 per day
Oil/Water Interface Probe .....	\$60.00 per day
pH/Temperature/Conductivity Meter (for water) .....	\$20.00 per day
Peristaltic Pump .....	\$40.00 per day
Hand Augers (10-foot).....	\$15.00 per day
Measuring Tape/Wheel.....	\$5.00 per day
Hand-held GPS Unit .....	\$25.00 per day
Generator.....	\$75.00 per day
Air Compressor (5 gallon) .....	\$25.00 per day
Electro fusion Machine .....	\$120.00 per day
Flow-Thru Multi-Parameter Meter .....	\$150.00 per day
Turbidimeter .....	\$35 per day
Composite Sampler.....	\$75 per day
QED Pump Controller.....	\$100 per day
GEM 2000.....	\$150 per day
Flow Probe (15-foot).....	\$150 per day
Digital Camera .....	\$10 per day
Expendable Equipment, Supplies & Rentals .....	Cost + 15%

Note: The rates shown above are effective through December 31, 2013 and are subject to revision thereafter.

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NATHAN A. HAMM, P.E.

**Education**

B.S., Civil Engineering, Kansas State University, 1998

M.S., Engineering Management, In Progress at University of Kansas

**Professional Licenses**

Professional Engineer

Kansas

Missouri

North Dakota

Texas

Iowa

**Specialty Certifications**

40-Hour OSHA Hazardous Waste Operations Training

Nuclear Gauge Certification

**Professional Affiliations**

Kansas Society of Professional Engineers, Past President

Solid Waste Association of North America (SWANA)

**Professional Experience**

Mr. Hamm is a registered professional engineer with more than 14 years of experience in the environmental engineering field. He is a Vice President in the firm and currently serves as the SCS Aquaterra Kansas City Office Manager. As Kansas City Office Manager he is responsible for managing the technical and support personnel and the office's financial performance and business development efforts. He is also responsible for managing complex projects, maintaining client relationships, and providing technical guidance.

During his career he has worked in a variety of industries including solid waste management, alternative energy, power generation, and agricultural production. He is adept at developing and managing multi-disciplinary teams to achieve critical client objectives.

Example project experience includes:

**Solid Waste**

**Good Bear Hill Disposal, Ft. Berthold Indian Reservation, North Dakota:** Mr. Hamm is the certifying engineering and principal-in-charge for this special waste landfill facility design and permitting effort in North Dakota. This facility is designed to accept oilfield waste from the northwest North Dakota region. Some features of the site include non-discharging storm water

management control, base grade design to maximize useable on-site soils and potential volume, and a liner system specifically designed to better tolerate construction during North Dakota winters.

**Springfield Sanitary Landfill; City of Springfield, Missouri:** Mr. Hamm has served as the primary client contact and senior project manager for the City of Springfield since 2004. Services provided for the City include routine annual engineering services, feasibility studies, permitting efforts, and designing and managing their large capital improvement projects.

Routine services include quarterly volume calculations and filling reports, financial assurance cost estimate updates, miscellaneous surveying, emissions inventory questionnaire preparation, greenhouse gas reporting, Tier II gas sampling and reporting, closure and post-closure plan updates, and miscellaneous solid waste consulting. Studies have included financial modeling and tipping fee analysis, alternative wastewater disposal feasibility, alternative final cover feasibility, and a hydrogeologic study for a horizontal landfill expansion. Large capital improvement projects have included:

**Cell Development** – Obtained minor permit modification approvals through the MDNR for three cell constructions totally approximately 18 acres. Prepared construction plans and specifications and assisted with bidding the projects and provided construction quality assurance services during construction.

**Leachate Disposal Pump Station and Forcemain** – Obtained permitting approval from the MDNR Solid Waste Management and Water Pollution programs, Missouri Department of Transportation, and Greene County, Missouri for a leachate pump station and 8.5 mile long forcemain. Services included permitting, design, cost estimating, construction document development, bidding assistance, and construction inspection.

**Landfill Gas System Expansion** – Obtained permitting approval from the MDNR for three expansions to the existing landfill gas collection system. Additional services included preparing construction documents, bidding assistance, and construction quality assurance inspection for the expansions.

**Barton County Subtitle D Landfill Design; Barton County, Kansas:** Mr. Hamm has been the primary client contact and senior project manager for Barton County since 2001. He served as project engineer for the design and application document preparation for the Subtitle D landfill at this site. He was intricately involved in all aspects of the project, including landfill siting, hydrogeologic site characterization, site layout, storm water drainage design, hydrologic and hydraulic modeling, leachate management modeling, gas collection system design, construction drawing development, regulatory negotiations, QA/QC plan preparation, closure and post-closure plans preparation, financial assurance, public hearings, and the application preparation. The landfill design was approved in January 2001.

Routine services provided for Barton County include groundwater sampling and analysis, annual financial assurance cost estimate updates, volume calculations, lysimeter reporting, greenhouse gas reporting, soil use planning and miscellaneous surveying.

Large capital improvement projects have included:

**Cell Development** – Designed, prepared construction plans and bidding documents, assisted with obtaining bids, and provided construction quality assurance testing and documentation for three Subtitle D landfill cells totaling approximately 24 acres.

**Alternative Final Cover Permitting and Construction** – Designed an evapotranspiration (ET) alternative cover for the 20-acre vertical expansion. The design included compiling soil, climate, and vegetation data and developing an UNSAT-H computer model to demonstrate compliance with applicable regulations. The alternative cover was approved by the Kansas Department of Health and Environment in July 2003. After approval, Mr. Hamm prepared construction drawings, specifications, and bid documents for the cover. Cover construction was completed in October 2003 and saved Barton County approximately \$800,000 in construction costs compared to the previously approved cover.

**Construction and Demolition Landfill** – Designed, permitted, prepared construction plans and bidding documents, and provided construction quality assurance services for the construction and demolition landfill. Three phases of the landfill have been constructed including the most recent cell in 2012.

**Salina Sanitary Landfill, Salina, Kansas:** Mr. Hamm provided technical guidance and senior quality review for the City of Salina's landfill master plan. The master plan will serve as a guide for developing the 500 acres site and included cell grading, leachate handling, final cover, gas management, groundwater monitoring, and other key design and operational features. The master planning effort substantially increased the usable airspace for the facility.

**Hamm Landfill; Perry, Kansas – Hamm Industries, Inc.:** Mr. Hamm has served as both the Project Engineer and Project Manager on a number of projects for Hamm Industries, Inc. including a storm water master plan for the site that was approved by the Kansas Department of Health and Environment in 2011. The storm water master plan is designed to address storm water issues throughout the long term development of the site. Additional projects have included designing an ET alternative final cover for the facility and providing construction quality assurance services for their past 4 cell constructions totaling approximately 50 acres.

**St. Joseph Sanitary Landfill, St. Joseph, Missouri:** Mr. Hamm has served as the senior project manager for the City of St. Joseph since 2010. Projects completed for the St. Joseph Landfill have include a financial model and tipping fee study, cost estimating for an active landfill gas collection and power generating system, wetlands delineation for a planned landfill expansion, SPCC plan update, Tier II gas sampling and reporting, surface and groundwater sampling and analysis, and a gas migration investigation and remedial design.

**Coffey County Sanitary Landfill; Burlington, Kansas:** Mr. Hamm served as the project manager for the design, permit application preparation, and construction quality assurance activities for the Subtitle D lateral expansion landfill. He was responsible for all portions of project completion from scheduling, design, and permit document preparation to project approval and closeout. The Coffey County Sanitary Landfill lateral expansion permit was approved and the facility began accepting waste in February 2002.

**Alternative Landfill Cover Design, Coffey County Sanitary Landfill; Burlington, Kansas:** Mr. Hamm had substantial involvement in designing the evapotranspiration alternative landfill cover for the Vertical Expansion. Mr. Hamm primarily served as the technical manager for this project providing internal review and design assistance.

**Reno Construction C&D Landfill; Overland Park, Kansas:** Mr. Hamm served as the project engineer on a final use study for the Reno Construction C&D Landfill. The scope of the study was to investigate the viability of constructing a recreation complex (softball and soccer fields and associated supporting structures) on top of the landfill following closure. The investigation entailed a detailed gas and structural stability analysis for the landfill as well as involvement in local political support and financing negotiations.

**Wheatland and Resource Recovery Landfills; Columbus and Cherryvale, Kansas:** Mr. Hamm has performed volumetric calculations (remaining airspace, soil quantities, etc.) on an annual basis for these landfills. The calculations are completed using aerial surveys and Land Development software by AutoDesk. The volumetric calculations are used by Allied Waste in their annual budgeting process.

**Forest View Landfill; Kansas City, Kansas – Allied Waste Industries Inc.:** Mr. Hamm has served as the project manager for constructing the last 5 cells at this site totaling approximately 15 acres. His responsibilities included preparing construction drawings, technical specifications and contract documents, managing all construction issues, obtaining the appropriated geotechnical and geosynthetics testing, and providing construction oversight in order to obtain authorization to operate the constructed cell.

**Johnson County Landfill; Shawnee, Kansas – Deffenbaugh Industries, Inc.:** During the last two years, Mr. Hamm has worked on a variety of projects for the Johnson County Landfill including designing and permitting a new C&D landfill and evapotranspiration alternative cover and serving as a technical reviewer for the construction quality assurance activities for the alternative cover construction and a new 20-acre landfill cell.

**Landfill Construction Quality Assurance; Kansas, Missouri, and Oklahoma Landfills:** Mr. Hamm has been responsible for creating construction drawings; material, construction, and testing method specifications; and bid documents for numerous Pre-Subtitle D and Subtitle D landfill projects in Kansas and Missouri. He has managed field personnel and data for landfill cell construction and closure, and has been responsible for compiling and organizing soil and geosynthetic quality assurance data for report submittals.

**Sporer Land Development; Ellis County, Kansas:** Mr. Hamm served as the project manager for a preliminary investigation for a proposed landfill site in Ellis County. The project included two separate phases. During Phase I Mr. Hamm was responsible for collecting and evaluating information pertinent to the feasibility of the landfill including a budgetary cost analysis that considered design cost, construction, operation and post-closure care of the proposed facility. Upon completion of Phase I, Mr. Hamm completed a design criteria report with a preliminary design of the landfill to present to the local zoning committee for approval.

**Groundwater Monitoring; Missouri and Kansas Landfills:** Collected and managed the collection of ground water samples, performed statistical analysis on the laboratory results, and prepared reports for the client's operating record at various sanitary landfills in Kansas and Missouri.

#### **Transfer Station**

**Wichita Area Transfer Station; Sedgwick County, Kansas:** Project engineer for the permitting, design, and construction of a 500 ton per day MSW transfer station to serve the Wichita metropolitan area. The project included rezoning of the transfer station site and issuance of a conditional use permit from Sedgwick County. Additionally, coordination with the Kansas Department of Health and Environment (KDHE) was required to obtain an operating permit for the facility. The final design consisted of a grade separated 4-bay transfer station with a single waste transfer pit. The facility was designed to accommodate future expansion of the tipping floor as well as an additional waste transfer pit.

#### **General Civil Engineering**

**Wastewater Disposal Feasibility Study; La Cygne, Kansas:** Analyzed an existing antiquated two-cell lagoon system at a large power generating station to assess the ability to handle a planned plant expansion and population increase. The project included characterizing the existing wastewater generation rate and quality. A financial feasibility report was prepared evaluating alternatives including new lagoon systems, pipelines to publicly owned treatment works, and package treatment systems.

**Ethanol Plant Site Development; Carrollton, Missouri:** Served as the senior project manager and responsible engineer for the civil site development design for a 55 million gallon per year ethanol production facility. Services included preparing all grading plans, traffic analysis, site layout, utility design and coordination, 1.5 mile water supply pipeline design, construction contract preparation, bidding assistance, and construction inspection. Ongoing routine services include water treatment system discharge testing and reporting, and air permit compliance assistance.

**Biodiesel Plant Permitting and Site Development; Carrollton, Missouri:** Providing civil site design and environmental permitting for an integrated soybean processing and biodiesel refinery. Aquaterra was responsible for all of the air and environmental permitting for the facility as well as the civil site development design, utility coordination, and construction contract preparation, and construction inspection.

**Air Construction Permitting, Greenfield Ethanol Plant; Abingdon, Illinois:** Served as the quality control/technical reviewer of the air construction permitting services for the construction and initial operation of a 100 million gallons per year ethanol production facility. Services included identifying emission points, developing emission estimates, determining regulatory applicability (i.e. NSPS), evaluation of necessary controls, regulatory negotiation / coordination, permit development and baseline modeling (Aermod).

**Environmental Permitting Soybean Processing and Biodiesel Facility; Eve, Missouri:** Served as the quality control/technical reviewer for completing the environmental permitting and compliance for the construction and initial operation of 2,000 tons per day soybean processing facility and 30 million gallons per year biodiesel production facility. The project included completing all air permitting and compliance; storm water, water treatment and wastewater permitting; as well as waste management and permitting at the facility.

**Air Dispersion Modeling Analysis, Biodiesel Production Facility; Storm Lake, Iowa:** Served as the quality control/technical reviewer for the completion of the air dispersion modeling analysis for the construction of a 33 million gallon per year biodiesel production facility. Aquaterra was tasked with completing the air dispersion modeling analysis and subsequent modeling analysis report as required by the Iowa Department of Natural Resources Air Quality Bureau (IDNR) for a minor source facility.

**Onsite Wastewater Treatment System Selection, Biodiesel Production Facility; Storm Lake, Iowa:** Served as the quality control/technical reviewer to provide wastewater treatment support to the design team for the construction of a 33 million gallon per year biodiesel production facility located in Buena Vista County, near Storm Lake, Iowa. Aquaterra was tasked with evaluating the ability and capacity of the local publicly owned treatment works (POTW) to treat process and non-process wastewaters. Due to sitting location, the local POTW could not accept the wastewaters.

**Storm Water Management; Kansas, Missouri, and Wyoming:** Designed storm water diversion channels, storm sewers, detention basins, and sediment traps for a variety of clients. Designs included hydrologic and hydraulic analysis, sedimentation calculations, inlet and outlet structure design, and construction drawing and specifications development.

**Heavy Equipment Maintenance Facility Foundation Design; Sugar Creek, Missouri:** Designed and provided inspection services for a reinforced concrete mat foundation for a heavy equipment maintenance facility. The foundation was designed to withstand not only the building loads, but significant live loads from heavy construction equipment. The building included a wash bay, maintenance/shop area, office, and restroom facilities.

**Cattle Feedlot Drainage Improvements:** Performed a site reconnaissance, topographic review, and prepared volumetric and hydrologic calculations to determine if the existing lagoon system was properly designed. It was determined that an approximately 1,000 acre watershed was discharging clean stormwater into the lagoon system. After identifying the problem, performed hydraulic design calculations and prepared construction plans for a new drainage channel with concrete drop structures to bypass the clean stormwater around the lagoon.

**Swine Nursery Facility Design; Oklahoma:** Performed design calculations and prepared construction documents for a swine nursery facility. Design included lagoons, building pad, sewer system, driveway, and parking areas.

**CAFO Swine Lagoon Analysis; Missouri:** Performed a site reconnaissance and installed piezometers with a drill rig to analyze seepage through an existing lagoon embankment to determine if the site was impacting a nearby waterway. The analysis included sampling to determine nitrate levels and a geotechnical stability analysis for the lagoon embankment.

**CAFO Swine Sewer Improvements; Missouri:** Prepared and submitted plans for sewer system improvements at a swine facility in Missouri. Services included topographic surveying, sizing the sewer piping, preparing plan and profile plans for the gravity sewer system and encased road crossing. The redesign resulted in eliminating a lift station thereby simplifying operations. The plans were submitted to the state regulatory authority for review and approval prior to construction.

**Water Quality Management Guide; Kansas City, Missouri:** Developed an urban water quality management guide for a storm water detention reservoir located in North Kansas City, Missouri.

**Small Earthen Dam Repairs; Kansas City, Missouri:** Designed corrections for a variety of problems including, seepage through the embankment, upstream bank undermining, and sedimentation. Following design, subcontracted a contractor to complete repairs, and oversaw all construction activities.

**Lake Dredging; Topeka, Kansas:** Designed a sedimentation basin and closure grading plan, attained discharge permits from the Corp. of Engineers and Kansas Department of Health and Environment, designed and prepared construction plans and specifications for a sediment trap, and performed subsurface surveying to determine payment volumes for a 40,000 cubic yard dredging project. The project was completed in a residential setting requiring substantial public relations and education throughout the project.

**Skylar Ridge Storm Water Drainage Improvements:** Performed a site reconnaissance and design calculations for stormwater drainage controls at an existing multi-family residential complex. The project included preparing detailed construction plans for a subsurface drainage system and connection to the City of Overland Park, Kansas's storm sewer system.

**Parkhurst Development Sedimentation Plan Compliance Review:** Documented existing sediment conditions in a small intermittent stream flowing through the Parkhurst Development and emptying into Shawnee Mission Park Lake prior to construction. During construction, made periodic stream and construction site inspections to assess contractor compliance with the City of Lenexa approved erosion and sediment control plan. Additional recommendations were made to improve sediment capture efficiency and to implement best management practices.

**Fairway Park Development Storm Water Drainage Plan Review:** Reviewed the design calculations and storm water drainage plan for a new development in Shawnee, Kansas. The scope of the review included assessing impacts on homes located directly downstream of the proposed development. Many inadequacies to the drainage plan were identified and presented to the City of Shawnee's Commission and City Engineer.

### **Remediation**

**Chanute Sanitary Landfill; Chanute, Kansas:** Mr. Hamm managed field personnel during horizontal delineation of an existing leachate plume from a closed landfill. The project consisted of advancement of more than 30 direct-push probes to collect groundwater for gas chromatograph testing. The chlorinated solvent plume covered more than 35-acres and discharged into a relatively large river.

After delineating the horizontal and vertical extents of the impacted groundwater plume, Mr. Hamm was responsible for preparation of a corrective action implementation plan for pilot testing a number of remedial technologies. He was involved in negotiating with regulators to gain plan and construction approvals, and coordinated and managed all field operations to implement the plan. Remedial technologies being pilot tested include permeable reactive walls utilizing zero-valent iron, compost, and sawdust, carbon donor injections to stimulate biological activity and enhance reductive dechlorination, and phytoremediation. The phytoremediation component of the project involved planting approximately 1000 hybrid poplars to help control the source of the contamination and deep planting 25 mature poplars to serve as a hydraulic control.

Additionally, Mr. Hamm has prepared a hydrocarbon contaminated soil landfarm permit for this site. Activities included collecting soil samples on a monthly basis, providing cleanup recommendations, and analyzing data until soil reached closure concentrations. Remediated soil was used to improve the existing landfill cover saving the client a substantial amount of money.

**Contaminated Groundwater Remediation; King's Mills, Ohio:** Collected and managed the collection of representative groundwater samples during and following Geo-Cleanse<sup>®</sup> groundwater treatment, performed field analysis, evaluated the laboratory provided analytical results, and prepared quarterly reports for the EPA and client. The reports included probability rankings for natural attenuation.

**Remedial Investigation Work Plan; Boonville, Missouri:** Prepared a work plan for investigating a project site in Missouri for PCE, PAH, creosote, and PCB contamination. The work plan included soil and groundwater sampling and analysis utilizing a van mounted Geoprobe<sup>®</sup> system and installation of groundwater monitoring wells. Oversaw the installation of groundwater wells and Geoprobe<sup>®</sup> field activities.

**RCRA Interim Groundwater Monitoring Plan; Kansas City, Missouri:** Prepared an interim groundwater monitoring plan for a large RCRA pharmaceutical facility in Kansas City, Missouri. The plan involved groundwater monitoring from a variety of depths to monitor contaminant

concentration trends throughout the entire aquifer thickness and evaluate the effects of seasonal Missouri River stage fluctuations on groundwater movement and quality.

**RCRA Remedial Investigation Plan; St. Joseph, Missouri:** Collected and evaluated groundwater elevation and analytical data for a large agricultural chemical manufacturing facility in St. Joseph Missouri. The project included analyzing historical and current groundwater elevation and analytical results to detect and evaluate trends and prepare a work scope for additional soil and groundwater investigations to be completed at the site.

**Underground Storage Tank Removal; Kansas City, Missouri:** Involved in all aspects of a UST removal in Missouri including assessment, tank removal and disposal, and remediation of hydrocarbon contaminated soil. Represented the client and worked directly with the Missouri Department of Natural Resources to obtain closure of the site.

**Petroleum Contaminated Soil Landfarm Design & Permitting; Great Bend, Kansas:** Designed and permitted a soil landfarm at the Barton County Sanitary Landfill to be used long term for treating petroleum contaminated soil accepted by the facility. The landfarm was designed with various treatment cells to allow soils from multiple projects to be treated simultaneously.

#### **Environmental**

**Due Diligence Assistance, Private Client, Missouri:** Performed environmental due diligence on Terra Bioenergy, LLC's (Terra's) biodiesel plant. The client was interested in obtaining an operational interest in the plant and wants to ascertain the plants current environmental permitting and compliance status. the current status, needed actions and noncompliance issues associated with air, wastewater and stormwater permitting, as well as hazardous waste generator information.

**Wetland Delineation, St. Joseph, Missouri Landfill:** Completed the wetland delineation for the proposed landfill expansion within a low-lying, heavily silted partially aquatic area south of the current landfill, and a relatively narrow stream channel that connects stormwater retention ponds and ditches on the landfill property to the low area/aquatic feature.

**Wetland Determination/Delineation, American Energy Producers, Inc. – Tina, Missouri:** Completed several wetland determinations and delineations for future development for the biodiesel plant.

**Design and Permitting of Water Supply Reservoir, American Energy Producers, Inc. – Tina, Missouri:** Completed the design and permitting of a water supply reservoir for a soybean processing and biodiesel production plant. Task included a feasibility analysis, geotechnical exploration and soil testing, dam structural design, preparing U.S. Army Corp of Engineers 404 permit application including wetlands determination and delineation, endangered species review, and cultural heritage site review, a land disturbance permit application and storm water pollution prevention plan and construction plans and specifications for the dam and reservoir construction.

## **Publications and Presentations**

Anastasia J. Welch, PE, Michael S. Kukuk, PG, Nathan A. Hamm, PE, and Susan L. McCart, PE, PG, “*Alternative Earthen Final Covers For Landfills – The Midwest Experience*” (Global Waste Management Symposium, September 2008)

Michael S. Kukuk, PG, Nathan A. Hamm, PE, Susan L. McCart, PE, PG, Anastasia J. Welch, PE, and Mark Witt, “*Evapotranspiration Final Covers: The Kansas Experience – From Concept To Reality*” (Landfill Symposium, June 2007).

*Improvements in Criteria for Estimating and Increasing Functional Stability in Older MSW Landfills*, Missouri Waste Control Coalition Conference, June 2012.

Creating Environmental Assets with Carbon Credits, SWANA/KDHE Solid Waste Managers and Operators Training Course, November 2009.

*Expedient Landfill Haul Road Design Considerations*, Nebraska SWANA, Cornhusker Chapter Annual Technical Conference and Fall Tours, August 2008.

*Permitting Challenges for Renewable Fuel Production Facilities*, Air & Waste Management Association, Midwest Section, March 2008.

## DAVID W. DRESSLER

### PROFESSIONAL EXPERIENCE

Mr. Dressler has 2.5 years experience as Field Project Manager for Terracon Consulting and 14 years of experience as Director of Construction Engineering Services for Dressler Consulting Engineers Incorporated (Dressler). Dressler was acquired by Terracon Consultants, Inc. in 2011. Mr. Dressler also has 14 years of experience as a vibration/blasting consultant, 3 years as a Radiation Safety Officer, 3 years as an Environmental Risk Assessor, and is a Certified Commercial Energy Auditor (March 2009).

Mr. Dressler has consulting experience with:

- Pre- and Post-Blast Surveys, Preconstruction Surveys
- Blast Plan Design
- Vibration and Blast Monitoring
- Design and Conduct Monitoring for Seismic and Noise Vibrations from Blasting and Heavy Equipment Construction Activity
- Safe Blasting Criteria Designs for Cities of Overland Park, Leawood, Lenexa, Shawnee, Lee's Summit, Lawrence and MODOT
- Safe Blast Design around Pipelines Utilizing Battle Safe Blast Design Program
- Deep Foundation Wall Monitoring
- Small Unmanned Aerial System (sUAS) Training

### Project Experience

*Market/Client Sector*

#### **Nall Avenue Pump & Reservoir Project-Leawood, KS**

Project manager for; background noise & vibration study, pre blast surveys, blast monitoring & reporting, post blast surveys.

**Professional Services Completed:** 2010

**Construction Completed:** Ongoing

**Construction Costs:** \$15 Million

**Dressler Fee:** \$30,000.00

*Market/Client Sector*

#### **Seismic Retrofit of Pyramid Arena – Memphis, TN**

Project manager for pre construction surveys of Pyramid arena and USACE flood retention wall.

**Professional Services completed:** 2012

**Construction Completed:** 2013

**Construction Costs:** \$11 Million

**Terracon Fee:** \$25,000.00

### Education

*Bachelor of Science, Environmental Studies, Southern Illinois University-Carbondale, 1993*

### Certifications

*Certified Commercial Energy Auditor (March 2009)*

*OSHA 10 Hour Construction Outreach (January 2012)*

*Unmanned Vehicle University Small Unmanned Aerial Vehicle Operations (June 2012)*

### Affiliations

*International Society of Explosive Engineers (ISEE)*

*Association for Unmanned Vehicles Systems International (AUVSI)*

### Publications

*U.S. Copyrights for: Damage Prevention Blasting Near Pipelines-Blast Design (VA0000883314 / 1997-10-30)*

### Registrations

*Blasters Training Missouri  
Limestone Association UM- Rolla  
Regulatory Update of Hazardous Waste Management Training  
Air Quality Training  
Blast Vibration Technology Conference*

*Market/Client Sector*

**4840 Demolition- K.C.MO**

Project manager for pre construction surveys of surrounding properties and vibration monitoring for duration of demolition.

**Professional Services completed: 2011-12**

**Construction Completed: Ongoing**

**Terracon Fee: \$22,000.00**

*Market/Client Sector*

**Fairbanks Morse, Kansas City, KS**

Project manager for pre construction survey, vibration monitoring and deep foundation wall monitoring around unique pre stressed concrete beam and shoring wall.

**Professional Services Completed: 2010**

**Construction Completed: 2010**

**Dressler Fee: \$12,000.00**

*Market/Client Sector*

**New Arrowhead Stadium- K.C., MO**

Project manager for pre construction survey of existing Arrowhead Stadium and Kansas City Chiefs Training Facility.

**Professional Services Completed: 2009**

**Construction Completed: 2010**

**Construction Costs: \$400 Million**

**Dressler Fee: \$31,000.00**

*Market/Client Sector*

**J.E. Dunn World Headquarters- K.C., MO**

Project manager for pre construction surveys of adjacent structures and street conditions adjacent to project.

**Professional Services Completed: 2009**

**Construction Completed: 2009**

**Construction Costs: \$110 Million**

**Dressler Fee: \$5,000.00**



## UAVA Personnel Rates

<b>CyberQuad Primary Operator</b>	<b>On-Site Hourly Rate</b>	<b>\$125.00</b>
	<b>On-Site Daily Rate</b>	<b>\$800.00</b>
<b>Assistant/Observer</b>	<b>On-Site Hourly Rate</b>	<b>\$75.00</b>
	<b>On-Site Daily Rate</b>	<b>\$450.00</b>
<b>Data Analysis</b>		<b>\$125.00</b>
<b>Personnel In Transit</b>		<b>\$75.00</b>
<b>Per Diem</b>		<b>\$75.00</b>

**Expenses:** Reimbursable expenses incurred directly for a project will be invoiced at actual cost plus 10%.

Vehicles used directly for a project will be charged at \$0.67 per mile.

**Note:** Deposition preparation/reading/research/ testimony or court testimony will be charged at 1.5 times the personnel's regular rate.

## APPRAISER'S SUMMARY OF QUALIFICATIONS

ANN R. MCREYNOLDS, PRINCIPAL  
MCREYNOLDS REALTY ADVISORS, LLC

- ADDRESS:** 345 Marshall Avenue, Suite #202  
Saint Louis, MO 63119  
314-961-9560 Phone/314-961-9560 Fax
- EDUCATION:** Washington University, Saint Louis  
Webster University, Saint Louis  
B.A. - Business/Management in Real Estate, with Honors  
The Appraisal Institute  
Appraising Real Property - 1979  
Standards of Professional Appraisal Practice - 1989 to 2012  
Capitalization Theory and Techniques - 1986  
Case Studies in Real Estate Valuation - 1987  
Valuation Analysis & Report Writing - 1987  
Federal Land Acquisitions (The "Yellow Book" Course) - 2007  
Eminent Domain & Condemnation - 2008  
Numerous courses and seminars on income capitalization, preservation easements, Right-of-Way acquisition, historic rehabilitation, rural land, highest and best use analysis, zoning, subdivision land analysis, land development, detrimental conditions, rural land, expert testimony, etc.
- MEMBERSHIPS:** Associate Member - The Appraisal Institute  
Candidate for MAI Designation - The Appraisal Institute  
Commercial Real Estate Women (CREW) - 1982 to Present/Former Board  
Landmarks Association of Saint Louis  
National Association of Realtors  
National Trust for Historic Preservation  
Rotary Club of Webster Groves  
Webster Groves Chamber of Commerce  
Webster Groves City Plan Commission - 1996 to 2002/Former Chair  
Webster Groves Traffic Advisory Commission - 2008 to Present  
Webster Groves Historical Society Board - 2008 to Present
- LICENSES:** Certified General Real Estate Appraiser State of Missouri  
Certificate Number RA-001073 - Current through 6/30/2014
- EXPERIENCE:** McReynolds Realty Advisors  
President/Principal - Founded in September 2001  
McReynolds Appraisal Company, Inc.  
Vice President/Associate Appraiser - January 1979 to September 2001  
Appraisal and advisory services for all classes of real estate, including vacant land, commercial, single-family residential, and timberland, with special expertise in complex estate and trust valuations, condemnation, litigation support, expert testimony, historic properties, special uses, market studies, Highest and Best Use analyses, and zoning issues.  
MoDOT Approved Appraisal Roster - 2002 to Present  
Qualified expert witness on real estate valuation in:  
Circuit Court of Saint Louis City, Missouri  
Circuit Court of Saint Louis County, Missouri  
Circuit Court of Saint Charles County, Missouri  
Missouri State Tax Commission  
U. S. Bankruptcy Court - Eastern District of Missouri

**REFERENCES FOR ANN R. McREYNOLDS**

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Mr. Brian Faust, ROW Specialist  
City of Saint Charles Public Works  
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Saint Charles, MO 63301  
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McDermott Will & Emery LLP  
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Saint Louis, MO 63101  
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11911 Dorsett Road  
Maryland Heights, MO 63043  
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Mr. Walter L. Metcalfe, Jr.  
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One Metropolitan Square, Suite 3600  
Saint Louis, MO 63102  
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Mr. Ryan Mohr  
Fox Galvin, LLC  
One South Memorial Drive, 12<sup>th</sup> Floor  
Saint Louis, MO 63102  
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10 South Broadway, Suite 200  
Saint Louis, MO 63102  
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Mr. Ken Nickless  
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470 East Lockwood Ave.  
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Ms. Ellen Dailey Rottjakob  
Assistant City Administrator  
City of Brentwood  
2348 South Brentwood Boulevard  
Brentwood, MO 63144  
Phone: (314) 963-8629

Mr. Eric S. Schmitt  
Lathrop & Gage, LC  
7701 Maryland Avenue, 4<sup>th</sup> Floor  
Saint Louis, MO 63105  
Phone: (314) 613-2811

Mr. Anthony Traxler,  
Assistant City Manager  
City of Maplewood  
7601 Manchester Road  
Maplewood, MO 63143  
Phone: (314) 646-3635