

GEO NEWS

Newsletter of the Association of Environmental & Engineering Geologists and
American Institute of Professional Geologists, Carolinas Sections



WINTER 2009



IN THIS ISSUE:

*AEG President Duane Kreuger at
February 4 AEG Carolinas
Section Winter Meeting in
Concord..... 4*

Briget Doyle wins Piteau Award .. 8

*Jahns Lecturer Paul Marinos Very
Busy Schedule in February .. 18*

*North Carolina Statewide Ortho-
imagery Project..... 30*

Table of Contents..... 2

SAVE THE DATE !

*February 4 at Dave & Busters in
Concord Mills Shopping Center*

GEONEWS WINTER 2009

Issue Date: December 21, 2009

TABLE OF CONTENTS**Articles**

Duane Kreuger to Speak on the State of Environmental Consulting February 4.....	4
Drivers Needed for AEG 2010 Field Trips	4
Dr. Briget Doyle Wins 2009 Piteau Award	8
AEG Publications Needs Articles & Photos	9
Board of Directors Meeting Summary Report	12
GSA Symposium on Asbestos.....	22
North Carolina Statewide Orthoimagery Project ..	30
Congressional Visits Need Citizen Geoscientists (flyer)	31

Columns and Regular Features

Message from the Chair <i>By Paul Weaver</i>	3
GeoRamblings— <i>By Dr. Charles Welby</i>	10
Announcements.....	23

Education Section

AGI Earth Science and Rock Kit Giveaway has Thankful Teachers and Students	16
Second Biennial Southeastern In Situ Soil and Groundwater Remediation Conference	17
Conference Program (flyer)	34-35
Jahns Lecturer Paul Merino Spring Schedule.....	18
Charlotte Teacher wins 2009 AGI Award for Excellence in Earth Science Teaching	18

Technical Section

Pneumatic Slug Testing on Highly Transmissive Aquifers	26
--	----

Upcoming Events

AEG 2010 Meeting Details (flyer)	20-21
Calendar of 2010 Events	32

Section Stuff

Deadlines for Submittals	2
Section Officers	2
AEG Carolinas Treasurer's Report	9
AEG Membership Application (flyer).....	33
Sponsor Application (flyer).....	34
Thanks to our Sponsors.....	35-36

Cover Photo: Former slag recovery site. Location and date confidential. Photo by Duane Kreuger.

Disclaimer: © 2009 Association of Environmental & Engineering Geologists - All Rights Reserved. Views expressed in this publication are not necessarily those officially representing the Association of Environmental & Engineering Geologists except where expressly stated.

GeoNews is a publication of the Carolinas Section of AEG. There are four issues per year, with deadlines and issue publication dates listed below. We publish news of the profession, technical articles, and **job** openings.

Deadlines for submittal to GeoNews (can be flexible depending on events)

Spring - deadline March 1, issue date March 21
 Summer - deadline June 1, issue date June 21
 Fall - deadline September 1, issue date September 18
 Winter - deadline December 1, issue date December 21

Deadlines for submittals for the National AEG News:

March issue - January 21
 June issue - April 30
 September issue - July 31
 December issue - October 31

AEG Carolinas Section - Current Officers and Contacts

Chair.....Paul Weaver, Chair@aegcarolinas.org
 Vice-Chair.....Brad Worley, Vicechair@aegcarolinas.org
 Treasurer.....Dave Duncklee, treasurer@aegcarolinas.org
 Secretary.....Kristen Lloyd, secretary@aegcarolinas.org
 Membership Co-Chair...Carin Kromm, clkromm@mactec.com
 Membership Co-Chair...Evan Riddle, NCSU, eriddle@ncsu.edu
 Field Trip Chair....Ben Draper, Benjamin_draper@golder.com
 Student Liaison.....Rick Kolb, rakolb@mactec.com
 Past Section Chair.....Rick Kolb, rakolb@mactec.com
 Advisor.....Jennifer Bauer, jennbbauer@gmail.com
 Advisor.....Gary Rogers, advisor@aegcarolinas.org

AEG Carolinas Section Website.....

www.aegcarolinas.org
 Webmaster.....Tami Idol, webmaster@aegcarolinas.org

AEG National Website.....

www.aegweb.org

AIPG Carolinas Section - Officers and Contacts

President.....John M. Stewart, 336-668-0093
jmstewart@kleinfelder.com
 Secretary/Treasurer.....Russ Patterson, (919) 774-3770
russ@pattersonexploration.com
 Membership Chair.....Macklin M. Armstrong, (919) 838-9933
armgeoeng@mindspring.com

GeoNews Editor (2003-).....

Jane Gill-Shaler (336) 883-0170
janehgill@stanfordalumni.org



919-831-8054 www.mactec.com

Rick Kolb, rakolb@mactec.com

Carin Kromm, clkromm@mactec.com

MACTEC is headquartered in Atlanta and is a leading consulting firm that provides engineering, environmental, and construction services. MACTEC has over 3,000 employees in 80 U.S. locations and has offices in Asheville, Charlotte, Greensboro, Research Triangle Park, Raleigh and Wilmington, North Carolina and in Greenville and Columbia, South Carolina.

MESSAGE FROM THE CHAIR

By Paul Weaver

Greetings to all from the new Chair of the Carolinas Section. I am excited to be taking on the position of your Section Chair. Rick Kolb, the outgoing Chair, has set the bar very high for this position with all he has done in his three years as the Chair, and I will do my best to meet the standards he has set.

The AEG Annual Meeting was held in Lake Tahoe, Nevada/California the end of September. Rick Kolb, Brigit Doyle, Jane Gill-Shaler, Jennifer Bauer, Charles Welby, and yours truly from the Carolinas Section attended the meeting. A good time was had by all with interesting talks, good camaraderie, and maybe a little gambling on the side (it was held at the Harrah's Hotel and Casino).

There was an excellent turn-out for the meeting and the weather was beautiful. For all of you who haven't had a chance to attend an AEG Annual Meeting, I highly recommend it (and next year, it's in your own back yard in Charleston!)

For those of you who haven't heard, our section was presented the Outstanding Section of the Year award at the annual meeting in Lake Tahoe. We are the envy of many of the other sections around the country, and they all want to know our secret. Well, our secret is that we have a strong core of dedicated, hard working individuals who go above and beyond to assure that our section is fulfilling the goals of AEG, and then some.

At the risk of leaving anyone out, I especially want to point out the excellent work that Jane Gill-Shaler has done and is doing in putting together the GeoNews, being a liaison for our wonderful sponsors, and organizing the AGI tool kit giveaways every year; Rick Kolb in his work with our student chapters and his work on numerous committees at the national level; Tami Idol in taking on the daunting task of being our web master; Jennifer Bauer for her work with the Visiting Professionals Program and other roles within the Section in addition to being the Treasurer of AEG National; Dave Duncklee for keeping us on the right path financially; and Carin Kromm for organizing meetings, organizing visiting professional visits,

and being willing to jump in to assist the Section whenever called upon. When you get a chance, please let these people know that you appreciate their efforts in promoting our profession.

In addition to our Section winning the Section of the Year Award, Brigit Doyle from our Section won the Piteau Award for Outstanding Young Member. A big, warm "Congratulations" is due Brigit for this well-deserved award! Brigit has worked tirelessly over the years on behalf of AEG, and she is now the Chair of the 2010

meeting in Charleston. See the article about Brigit's award on page 8 of this newsletter.

This coming year promises to be an exciting one for the Carolinas Section. We will be the host of the 2010 Annual Meeting in Charleston, and we are well on our way in preparing for this momentous task. But there is still a lot of work ahead of us, so I urge anyone who can to volunteer to help out on one of the committees for the meeting. A flyer with the committees and contact information for the chairs can be found on pages 20-21 of this newsletter.

In addition, if you have an idea for a technical session topic, or if you

know of someone who has an interesting presentation on a project or topic that you think would be a good addition to the meeting presentations, please let me know (in addition to being the new Section Chair, I'm also Chair of the Technical Sessions/Symposia for the 2010 meeting).

Please feel free to contact me with questions, concerns, or ideas to help make the Carolinas Section of AEG even stronger. I look forward to seeing and talking with each of you at our quarterly section meetings.

Paul Weaver

Paul Weaver is Manager of the Transportation / Drilling department of Kleinfelder (formerly Trigon Engineering Consultants, Inc.) in Greensboro, NC.

Ed: Be sure to come to AEG Carolinas Winter Meeting in Concord February 4. Information is on page 4 of this issue.



Paul Weaver, Rick Kolb, Brigit Doyle, and Jane Gill-Shaler at Lake Tahoe with the 2009 AEG Outstanding Section Award.

DUANE KREUGER, AEG PRESIDENT, IN CONCORD NC THURSDAY FEBRUARY 4

TITLE: Environmental Consulting – Where We're at and Where We're Going.

ABSTRACT: Environmental regulations keep changing, partly due to ever-improving technology and partly due to public perception and political climate. Decisions regarding environmental consulting are generally driven by compliance with environmental regulations (federal, state and local), business risk, and concerns regarding public health & the environment. Some of the major federal regulations governing environmental projects fall under the jurisdiction of United States Environmental Protection Agency (USEPA) and the Occupational Safety & Health Administration (OSHA). States sometimes enter into agreements with federal agencies on certain environmental issues or they develop their own legislation. Between states, environmental regulations can be very similar (asbestos for example) or they can be completely different (underground storage tanks-USTs.) Examples of common environmental projects include, Phase I environmental site assessments (ESAs), Phase II ESAs risk-based

assessments, asbestos and lead-based paint inspections, hazardous materials surveys, wetlands delineations, noise and indoor air quality surveys, and air emissions permitting and monitoring. Examples of recent projects will be used to discuss a variety of environmental issues of concern to the environmental consultant. Current and future environmental projects will include such things as regulated spill prevention, control and countermeasures (SPCC) plan preparation, increased focus on indoor air quality, mold and industrial safety, compliance, carbon sequestration and greenhouse gas emissions reduction.

BIO: Duane T. Kreuger (M-STL) - Mr. Kreuger is the Environmental Group Manager for Geotechnology, Inc. in St. Louis, Missouri, where he leads a team of 14 to assist clients throughout the Midwest with their environmental project needs. Some of his recent projects include: management of environmental consulting services for the Lambert-St. Louis Airport Expansion Program, coordination of several Brownfield assessment and cleanup grants, direction of environmental assessments related to a 7.3 mile extension of the MetroLink light rail transit system and management of over 100 underground storage tank sites for a major oil company client. Duane has been with Geotechnology since the beginning of his career, working in the field and managing various aspects of geotechnical and environmental projects for 17 years. He has been an active member of AEG since 1996, and since then he has served as, prepared guidebooks and served as a co-leader for two Section field trips, served as field trip coordinator for the AEG 2001 Annual Meeting, and has served as co-chair of the Governance Committee from 2003 to 2006. In 2004 he received the AEG Douglas R. Piteau Outstanding Young Member Award. Duane received his bachelor's in Geology from the University of Illinois-Urbana in 1992. He is a Registered Geologist in Missouri and Professional Geologist in Illinois, and he is an Environmental Professional per ASTM 1527-05 and AAI criteria.

AEG CAROLINAS WINTER SECTION MEETING THURSDAY, FEBRUARY 4, 2010

Program: Environmental Consulting – Where We're at and Where We're Going

Speaker: Duane T. Kreuger, Geotechnology, St. Louis, MO

Place: Dave and Buster's, 8361 Concord Mills Blvd., Concord, North Carolina 28027

Date: Thursday, February 4, 2010

Time: 6pm social, 7pm dinner, 8pm speaker

Directions: See page 5

Cost: Member/Non-member \$25; Public Sector employees \$15

Students: FREE with college ID

Reservations: Please make reservations by 5pm on Monday January 28 2010 with: Brad Worley, bdworley@ncdot.gov, 919-250-4088, or mail your reservation to: Brad Worley, NCDOT Engineering Unit 1020 Birch Ridge Drive Raleigh NC 27610

PDH's: the SC Board of Registration for Geologists will offer 1 PDH for attending this event

DRIVERS NEEDED FOR 2010 ANNUAL MEETING FIELD TRIPS

Would you like to go on one of the fabulous field trips at the 2010 meeting? Would you like to have your field trip registration fee covered? Would you like a complimentary lunch? Would you enjoy driving groups of geologists around North and South Carolina? Are you over 21?

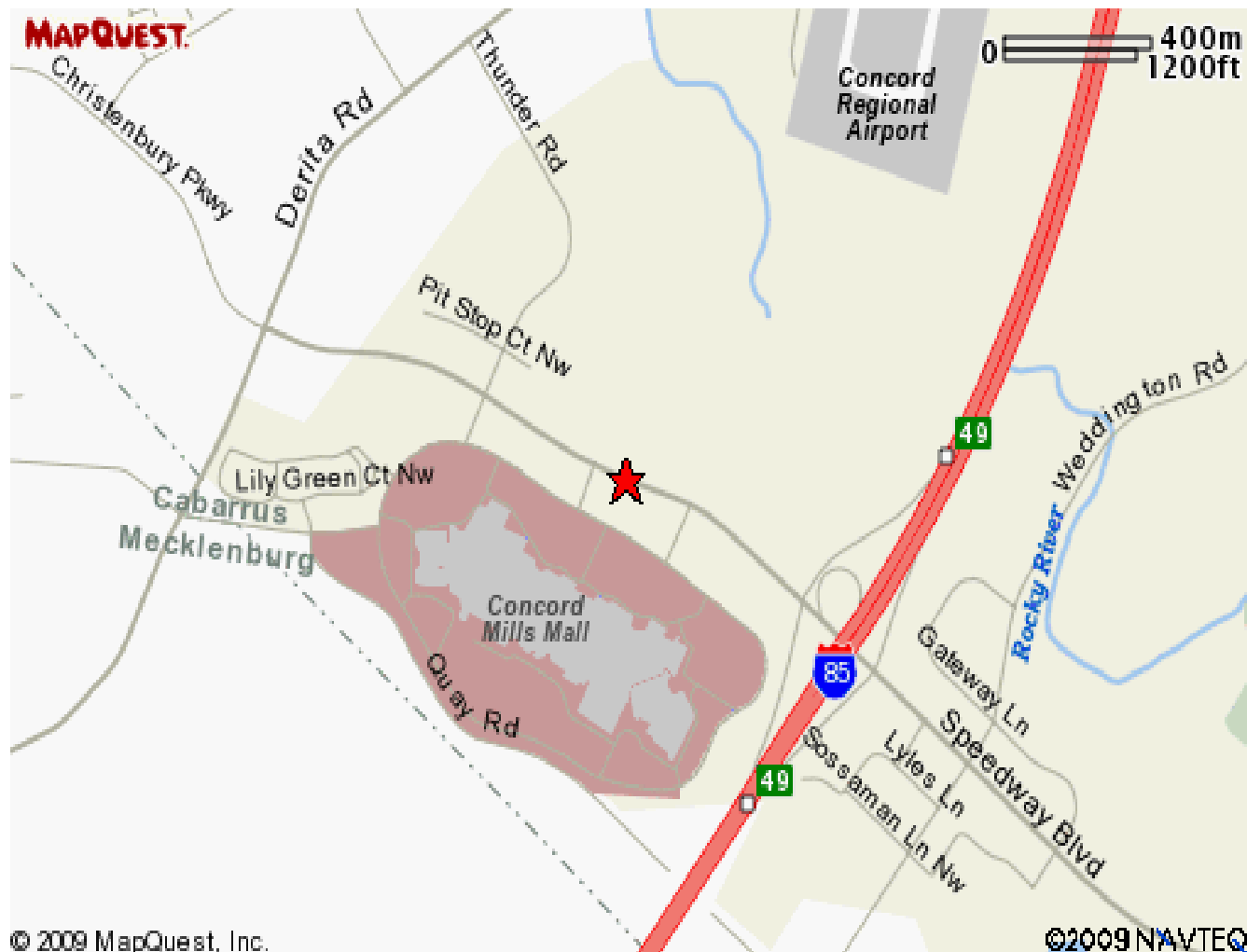
If you answered yes to all of these questions, contact 2010 Annual Meeting Field trip Committee chair, Jennifer Bauer at jennbbauer@gmail.com. We need drivers!

DIRECTIONS:**FROM THE SOUTH**

Take I-85 North towards Greensboro. Take the BRUTON SMITH BLVD exit, EXIT 49, toward CONCORD MILLS BLVD. Turn left onto SPEEDWAY BLVD. SPEEDWAY BLVD becomes CONCORD MILLS BLVD. Make a left into the Concord Mills Mall. Dave and Buster's is located at the western end of the mall facing Concord Mills Blvd.

FROM THE NORTH

Take I-85 South towards Charlotte. Take the BRUTON SMITH BLVD/CONCORD MILLS BLVD exit, EXIT 49. Turn RIGHT onto CONCORD MILLS BLVD. Make a left into the Concord Mills Mall. Dave and Buster's is located at the western end of the mall facing Concord Mills Blvd.



**Environmental
Conservation Laboratories**

Cary, NC Lab:

ENCOCRY@encolabs.com

Tel: 919-677-1669

Fax: 919-677-9846

Orlando, FL Lab:

ENCOORL@encolabs.com

Tel: 407-826-5314

Fax: 407-850-6945

Jacksonville, FL Lab:

ENCOJAX@encolabs.com

Tel: 904-296-3007

Fax: 904-296-6210

Corporate Office:

10775 Central Port Drive,
Orlando, FL 32824



REDOX TECH, LLC



FINAL PROGRAM

SECOND BIENNIAL SOUTHEASTERN *IN SITU* SOIL AND GROUNDWATER REMEDIATION CONFERENCE

February 23 and 24, 2010

Redox Tech, the Association of Environmental and Engineering Geologists, and the Groundwater Professionals of North Carolina (GWPNC) have finalized the program for the Second Biennial Southeastern In Situ Soil and Groundwater Remediation Conference on February 23 and 24th 2010 in Raleigh, North Carolina. The conference will provide a forum for providing the state of the art for a wide range of in situ remediation technologies.

On the first day of the conference, recognized speakers from around the country will present on their area of expertise. On the second day, case studies will be provided by consultants and vendors on the application of emerging technologies, with lessons learned. The Conference should provide a valuable opportunity for groundwater professionals to keep abreast of recent developments in remediation technologies, while potentially earning continuing education credits.

FEBRUARY 22, 2010 - REGISTRATION

Registration, sign-in and display booth setup is from 6:00 p.m. to 8:00 p.m. Pre-registration is advised but registrations openings may be available at the conference.

FEBRUARY 23, 2010 - AGENDA

7:00 to 8:15	Continental Breakfast Provided as Part of the Conference Registration
8:15 to 8:30	Opening Remarks; John Haselow, Redox Tech, LLC
8:30 to 9:00	The State of Practice in <i>In Situ</i> Remediation; Dick Brown, ERM
9:00 to 9:30	Retrospective on Twenty Years of Peroxygen ISCO Research; Professor Rick Watts, Washington State University
9:30 to 10:00	Permanganate for <i>In Situ</i> Remediation; Matt Dingens, Carus Chemicals
10:00 to 10:30	Mid-Morning Break
10:30 to 11:00	Activated Persulfate Chemical Oxidation and Its Impact on Microbial Populations; Phil Block, FMC Chemicals
11:00 to 11:30	The Value of ISCO Treatability Studies: When Should They be Conducted and How do Results Support the Design Process; Michelle Crimi, Clarkson University
11:30 to 12:00	Superoxide Catalysts for In-Situ Reduction of VOCs; Dan Bryant, Geo-Cleanse International
12:00 to 1:00	Lunch Provided as Part of the Conference Registration
1:00 to 1:30	Field Characterization of Mass Transfer in a NAPL Source Zone; Bo Stewart, Praxis
1:30 to 2:00	Zero Valent Iron Technology; John Vogan, EnviroMetal Technologies, LLC
2:00 to 2:30	In Situ Chemical Reduction Technologies: Differentiators and Technology Implementation; Jim Mueller, Adventus Americas
2:30 to 3:00	Mid-Afternoon Snack
3:00 to 3:30	Current Practice and Advances with nZVI Technology; Dan Elliott, GeoSyntec
3:30 to 4:00	Frequently Asked Questions about Applying Bioaugmentation for Chlorinated Solvent Remediation; Robert Steffen, Shaw Environmental
4:00 to 4:30	Pneumatic Fracturing for Delivery of Remediation Amendments; Deborah Schnell, Pneumatic Fracturing, Inc.
4:30 to 5:00	Combined Remedies for Effective Remediation of NAPL Sites; Jim Cummings, EPA
5:00 to 6:30	Social Hour - Sponsored by Redox Tech and Adventus Americas

FEBRUARY 24, 2010 - AGENDA

7:15 to 8:15	Continental Breakfast provided as part of the conference registration
8:10 to 8:40	New "Directions" in <i>In Situ</i> Remediation: A DOE perspective; Brian Looney, Savannah River National Laboratory
8:40 to 9:00	The Formation and Stability of Arsenic Precipitates in Groundwater using EHC-M; John Vogan, The Adventus Group
9:00 to 9:20	An Innovative Hot Spot Remedial Approach for a Wood Treating Site in Mississippi; Thomas Richardson, International Paper
9:20 to 9:40	Full-Scale Enhanced Bioremediation of CVOCs in a Sand and Gravel Aquifer; Tim Adams, Roux Associates
9:40 to 10:00	Use of Chemical Oxidation Coupled with Bioaugmentation to Treat Groundwater Underneath a Day Care Facility; David Robinson, The Whitman Companies
10:00 to 10:20	Mid-Morning Break
10:20 to 10:40	Use of Existing SVE System for Aerobic Co-Metabolic Degradation of Chlorinated Hydrocarbons; Jim Zubrow, Key Environmental
10:40 to 11:00	Bioaugmentation Approaches for Effective Bioremediation of Mixed Contaminant Sites; Phil Dennis, SIREM
11:00 to 11:20	Fluorescent Dye Tracing For Defining Chlorinated Ethene Plume Remediation Target; Eric Klingel, Zapata Engineering
11:20 to 11:40	Surfactant Enhanced Recovery of LNAPL Pilot Testing in a Debris Fill Unit, Charlotte Air National Guard; Helen Corley, AMEC Earth & Environmental
11:40 to 12:00	A comparison of aqueous PCE and TCE degradation using persulfate with lime, sodium hydroxide, or no additional amendment; Joe Rossabi, Redox Tech LLC
12:00 to 1:00	Lunch provided as part of conference registration
1:00 to 1:25	Applicability of bacteria, <i>Thiobacillus</i> , in Combating Acid Mine Drainage: A Case Study; Pradeep Kumar, Central Mine Planning & Design Institute (India)
1:25 to 1:45	International Chemical Oxidation Remediation Lessons Learned; Isaac Aboulafia, MECx
1:45 to 2:05	Enhancing the Deliverability of NZVI in a Fractured Bedrock System Using Hydraulic Fracturing and Pressurized Injection; Michael Borda, Golder Associates
2:05 to 2:25	Results of Tandem In-Situ Chemical Oxidation and Accelerated Anaerobic Bioremediation; Keith M. Gaskill, SESCO Group
2:25 to 2:40	Snack Break
2:40 to 3:00	"Stepped" In Situ Chemical Oxidation of contaminant Mass in Vadose Zone Soils; Bon Lunardini, P.E., URS Corporation
3:00 to 3:20	Oxidant Stability vs NOD – Comparison of Peroxide, Persulfate and Permanganate, Neil Thomson, University of Waterloo
3:20 to 3:40	Successful Bioremediation of Potential Chlorinated Solvent DNAPL; Christie Zawtocki, Hart and Hickman, PC
3:40 to 4:00	Secondary Water Quality Impacts From In Situ Injectable Substrates and Chemicals; Tony Lieberman, Solutions-IES, Inc.
4:00 to 4:20	Accelerated Site Cleanup Using a Sulfate-Enhanced In Situ Remediation Strategy; Timothy Parker, EOS Remediation, LLC
4:20 to 4:30	Closing Remarks, Dr. John Haselow Redox Tech, LLC

COST

The cost of registration for the conference is \$250, and the registration includes continental breakfast, snacks and lunch. **Members of the Groundwater Professionals of North Carolina, Association of Environmental and Engineering Geologists, students, and faculty receive a \$50 discount on registration. State of North Carolina employees should call to receive a reduced rate.** Each participant is responsible for their own dinner and lodging. Redox Tech is the promoter and main sponsor of the conference and is not directly profiting from the conference. The cost covers direct costs such as the conference room, lunch, beverages, snacks and A/V equipment rental. Participation is limited to the first 300 registrants. Registration is fully refundable up to two weeks prior to registration, less an administrative fee of \$25. If you cannot attend, your registration may be transferred to another participant. Single day registrations are not available.

DR. BRIGET DOYLE WINS THE 2009 PITEAU AWARD

One of our very own Carolinas Section Members, and the Chair of the 2010 AEG Meeting in Charleston, Dr. Briget Doyle, has been awarded AEG's prestigious Douglas R. Piteau

Outstanding Young Member Award. This award, established in 1985, is named in honor of Douglas R. Piteau, a deceased Member of the Association who distinguished himself early in his career as an expert on landslides and rock slope stability. This award is presented to a Member who is age 35 or under



(not 36 until January 1 in the year following the Annual Meeting in which the Award is given) and has excelled, either singly or in combination, in the following areas: Technical Accomplishment, Service to the Association, and Service to the Engineering Geology Profession. Each Section is, at its discretion, to choose an individual deserving of the Award, to publicize the nomination at the Section level, and to nominate the individual to the Awards Committee.

Dr. Doyle, College of Charleston Assistant Professor of Geology, has excelled in all of the areas that the award is meant to recognize. Her vitae shows that she has distinguished herself as technically competent through over 30 national and regional presentations; she has been the author or co-author of the majority of these presenta-

tions. Some of her recent presentations include using Geographic Information Systems to map and analyze the distribution and impact of former manufactured gas plants in the United States, seismically-induced landslipping in the western New Madrid Seismic Zone, and impacts in the event of dam outburst floods in western North Carolina.

Dr. Doyle has further distinguished herself through the publication of 3 peer-reviewed papers (with two more in preparation) and a number of invited talks. She is very much dedicated to the AEG through her service to the society, participating at both the national and local levels. Some of her activities include: National Participation: AEG member since 1996; Published in E&EG (2 papers); AEG Student Professional Paper Competition, First place, Graduate Division, Sept. 2003; Students and Young Professionals Support Committee Member, 2007 – present; Programs Committee Member, AEG Foundation, 2008 – present; Annual meetings participation in 8 of the last 10 years, 2004 Annual Meeting Planning Committee member; and in 2010 she will be chair of the AEG Annual Meeting in Charleston.

Finally, her service to the profession can be seen in her chosen career as a university professor -- training tomorrow's members. Carolinas Section members are very proud of Briget's accomplishments, and are thankful to AEG for bestowing on her this well deserved award. Congratulations to Briget from all of us here in the Carolinas!

Douglas A. Canavello, P.G.
President



503 Industrial Ave. (27406)
P.O. Box 16265
Greensboro, NC 27416-0265

(336) 335-3174 ext. 121
(866) 545-9507
Fax (336) 691-0648
doug@pyramidenvironmental.com
www.pyramidenvironmental.com

SAEDACCO

South Atlantic Environmental Drilling and Construction Company

Peter I. Byer President

pyer@saedacco.com Cell: 704.634.1046

Toll Free: 800.849.0353 Tel: 803.548.2180 Fax: 803.548.2181

9088 Northfield Dr. Fort Mill, SC 29707 **SAEDACCO.COM**

Mobile Labs • MIP Services



GCMS/GC (8260, 8021) Volatiles
Pesticides/PCBs

Membrane Interface Probe (MIP)

NCDENR, SCDHEC, NELAC
Certified Mobile Labs
WMBE Certified

Phone: 352-367-0073 www.kbmobilelabs.com

AEG PUBLICATIONS NEEDS ARTICLES AND PHOTOS

Headquarters at AEG recently sent out an email requesting information updates for all the sections and chapters. Also, if you want to be seen in the 2010 Membership Directory, please renew your membership by December 1, 2009. The 2010 Directory will be in layout during December and we will not be able to get your name into the correct slots (Section/Chapter/City/ alphabetical listing) if you are tardy. We will have a "late renewal" page or two as we did last year for those who renew after December 1 and before we go to press, but this is placed at the end of the membership pages only.

Photographs are needed for the NEWS, especially if you attended the Annual Meeting in Tahoe, but also if you have a good photo of something relating to environmental or engineering geology that can be used as a cover or as general interest. Ideally, you will write an article for the NEWS and your photos will enhance the text of that article. Send the photos as jpg files not as embedded copy, to Martha Kopper and Andie Ptak at the email addresses on the masthead page of each issue of the NEWS.

Engineering and Environmental Geology (EEG) journal also wants your technical articles. These submissions are peer reviewed and instructions to authors are found on the AEG Webpage. EEG received only 88 manuscripts last year, about half from authors outside North America. If you are one of the 97% of AEG members who did not submit a paper in 2009, perhaps 2010 is YOUR year to gain "fame" as an author published in the AEG/GSA journal. Note that "fortune" is not mentioned in the above. If you are one of the more than 250 presenters at the recent Tahoe Annual Meeting, you have most of the hard work done.

Thanks for your help in making AEG publications outstanding in the fields of environmental and engineering geology. To submit your photos and articles, contact AEG Communications Director Allen V. Shaw, at (301) 228-7990 or avshaw@bechtel.com.

AEG CAROLINAS TREASURER'S REPORT

By David Duncklee, Treasurer

July 9 to December 14, 2009

Balance As Of July 9, 2009	
Checking Account	\$6,608.41
Money Market Account	\$12,085.89
Charleston Planning Account	<u>\$3,001.24</u>

INCOME	
Dinner Meetings (Members paid directly)	\$0.00
Sponsorships	\$2,190.00
AEG Dues rebates	\$150.00
Defined donations	
AGI Toolkits	\$1,532.50
"Unstable Ground" Books (J. Gill-Shaler)	\$110.93
Scholarships	\$0.00
AEG Field Trip Attendees	
AEG Short Course Sponsors	\$935.00
Guide book refund	\$134.42
Interest	
Charleston 2010 Account	\$0.59
Money Market	<u>\$1.51</u>
SUBTOTAL	<u>\$5,054.95</u>

EXPENSES	
Dinner Meetings	
Greensboro Meeting	\$0.00
Cake	\$45.42
Deposit for Febr 2010 Charlotte Mtg.	\$899.20
Educational Programs	
AGI Toolkits	\$3,080.00
Meeting with NCSU AEG Students	\$110.00
Meeting with UNC-C AEG Students	\$48.74
Student Memberships	\$600.00
Student Travel Grants (M. Adams)	\$500.00
Duke Forest Field Trip Books	\$500.00
Duke Forest Field Trip Lunches	\$393.49
Chair Travel Grant - Reno	\$983.91
"Unstable Ground" Books	\$177.50
Visiting Professionals	\$0.00
Charleston 2010 National Meeting	
Convention & Visitors Bureau	<u>\$400.00</u>
	<u>\$7,738.26</u>

BALANCE As Of December 14, 2009	
Checking Account	\$3,880.63
Money Market Account	\$12,088.42
Charleston Planning Account	<u>\$2,527.29</u>
TOTAL	<u>\$18,496.34</u>

Respectfully Submitted,

David L. Duncklee

Treasurer, AEG Carolinas

Travis Bowman
Sales Associate

ChemRem International LLC

PO Box 1239
Davidson, NC 28036
Cell: (704) 728-5800
Toll Free: (877) 243-6736
tbowman@chemrem.com
www.chemrem.com



GEORAMBLINGS

By Dr. Charles W. Welby

History of Licensing of Geologists in North Carolina, continued.

In the Summer 2009 issue of GeoNews I described some of the first steps taken by geologists in North Carolina to formulate a legislative package for the licensing of Geologists in North Carolina. This column is devoted to events that transpired after the decision was made.

After the Carolinas Section of AIPG was officially recognized by the national offices of AIPG in October 1974, Charles H. Gardner, President of the Carolinas Section, sent a letter dated March 25, 1975, to geologists in North Carolina. He announced in the letter the appointment of Craig McKenzie as Chair of the AIPG Registration Law Committee and called for volunteers to assist in the preparation of a Registration Law Document. It was planned to have the proposed legislation ready for introduction into the 1977 session of the North Carolina State Legislature. But as is often said about legislative matters, "There is many a slip between the cup and the lip."

The 1977 session of the N.C. Legislature decided to pass a "Sunset Act," causing a moratorium on the creation of new boards of registration and licensure as the leg-

islature reviewed existing boards and their purposes and work. Four years later, in 1981, the "Sunset Act" was repealed, and the opportunity for consideration of a Geologists Registration Act came into existence for the January 1983 session of the Legislature.

On May 8, 1982, 28 geologists residing in North Carolina and having membership in AIPG, AEG, GSA, and AIME met at the NCSU Faculty Club (now University Club) to consider the next step or steps to be taken with regard to licensure/registration of geologists in North Carolina. Speakers at this meeting were M.O. Turner, President of AIPG, Earl Titcomb of Georgia, and Burrell S. Whitlow of Virginia. They addressed various topics related to licensure and registration of geologists drawn from National, Georgia, and Virginia perspectives. After hearing from the speakers and a period of discussion, the group (informally the "Intersociety Committee") voted to proceed with legislative efforts to get a Geologists Registration Act into the N.C. Legislature during its 1983 session and to promote its passage. Norman Tilford, President of the Carolinas Section of AIPG, agreed to serve as General Chairman of the effort.

A letter dated June 1, 1982, was prepared for transmission to all geologists known to live in North Carolina meeting by a subcommittee of the "Intersociety Committee" consisting of Charles H. Gardner, Chair, H.F. Koch, Ronald W. Coble, and Charles W. Welby. The

(Continued on page 11)

Subsurface Sampling, Injection and Data Collection for Environmental Professionals since 1992

- * Real-time Lithology & VOC Logging with MIP
- * Real-time Cone Penetrometer Logging with CPT or CPT/MIP for Soil Stratigraphy & VOC Logging
- * Installation of Monitoring Wells, 2" Prepacks & CMT Multilevel systems.
- * Complete Bioremediation & Chem Ox Injection Services
- * Soil Vapor Intrusion Investigations
- * Geoprobe Subsurface Soil and Groundwater Sampling

Headquarters
NYC, NJ &
Southern
CT Area

LYNBROOK, NY
516-595-6300

ATLANTIC
HIGHLANDS, NJ
732-291-8276

Upstate NY &
New England

ALBANY
518-456-9922

NIAGARA FALLS, NY
716-297-5567

UXBRIDGE, MA
508-581-9880

Mid-Atlantic
Region

★ CARY, NC
919-424-6122

Southern
Region

TAMPA, FL
813-655-1717

Membrane Interface Probe



MIP

The Membrane Interface Probe (MIP) is a screening tool with semi-quantitative capabilities acting as an interface between the contaminants in the subsurface and gas phase detectors at the surface.

Hydraulic Conductivity Tool



HPT

The Hydraulic Profiling Tool (HPT) allows the user to create fast, continuous real-time profiles of soil hydraulic properties in both fine and coarse-grained material.

Electrical Conductivity



EC

Soil conductivity and resistivity (the inverse of conductivity) have long been used as tools to classify soils.

Go to www.teamzebra.com for more information

(Continued from page 10)

letter requested comments, suggestions, and answers to questions on an enclosed questionnaire. A draft copy of the proposed legislation was included.

My notes indicate that a deadline of September 1, 1982, was set for receipt of the comments, and suggestions. They also indicate that a request for funds to support the licensing effort was distributed during the summer of 1982. By September 1 a sum of \$1200 had been collected for support of the licensure effort.

An informal "Intersociety Steering Committee" was formed in October 1982 and started work on a revision of the draft proposal distributed in June. The committee had received a number of comments and suggestions which were given due consideration.

At a meeting of the Steering Committee in Durham on October 26, 1982, (Members present: George L. Bain, Norman R. Tilford, Walter Wheeler, Charles W. Welby, Charles H. Gardner, and Ronald W. Coble, G. Dan Johnson, and H.F. Koch) it was decided that letters should be sent to each of those people who responded to the questionnaire sent out in June. Of the 350 letters mailed 318 were not returned and from those the committee received 113 responses (32.2 % of the total mailed or 35.5% of the 318 not returned). Of importance is the result from the question, "Do you support the idea of N.C. Geologists Registration?" Eighty-six percent of those responding answered "Yes."

It was decided that the committee members should respond to the comments and ideas that had been received by sending personal letters to each of the respondents. The names of the 113 respondents were divided among those present, and subsequently letters were written acknowledging the concerns and suggestions expressed by the respondents to the questionnaire and explaining why certain decisions had been made.

At the October 26 meeting three subcommittees were formed: a Legislative Committee consisting of E.P. Allen, Henry S. Brown, and George Bain; Neil Gilbert took on the responsibility of the Liaison Committee; H.F. Koch accepted the responsibility for the Finance Committee. The Steering Committee continued to be chaired by Norman R. Tilford.

In January 1983 a copy of the proposed Licensing Act was sent to several Engineering organizations. Accompanying the copy was a request for comments and suggestions as well as their support for the effort of the geological community in the licensing matter.

Early in 1983 the Steering Committee arranged for legal assistance in drafting the Act. On March 4, 1983, the Committee met in the office of Stephen Conrad, State Geologist, in Raleigh to review the Geologists Registration Bill prior to a meeting with the legal firm. George Bain, in the absence of Norman Tilford, the Chairman of the Steering Committee, presided. In attendance were Ron Coble, Charles Gardner, David Bingham, Charles Welby, and George Bain. Neil Gilbert sent comments by mail.

The document was reviewed line by line with appropriate revisions being made.

At the conclusion of the meeting Charles Gardner, George Bain, and Charles Welby met with George Hearn of the law firm, Johnson, Shearon, and Gamble, in its offices to discuss the revisions that had been made in the document. The revisions were finalized, and a new draft was scheduled to be available on March 7, 1983.

The updated draft Bill from the March 7 meeting was distributed to members of the Steering Committee via a letter from George Bain which was dated March 7, 1983.

Also on March 7, 1983, George Bain sent a second letter out to the geologists on the Steering Committee's mailing list in which he noted that it had been agreed at the May 8, 1982, meeting that the AIPG representatives would take the leadership role in getting the Bill through the Legislature. He also noted that it had been necessary to engage a legal firm to help with the introduction of the Registration Bill into the Legislature and to assist in getting it passed. The firm of Johnson, Shearon and Gamble in Raleigh had been engaged to help with passage of the Bill. A total of \$5,000 was the estimated cost of the revisions to the Bill and for legislative services (i.e.,

(Continued on page 19)

Schnabel
Schnabel Engineering
Offices coast to coast to serve you

- Dam Engineering
- Geotechnical Engineering
- Engineering Geology
- Geophysical Services

11 A Oak Branch Dr., Greensboro, 27407 • 336.274.9456 • www.schnabel-eng.com

AEG BOARD OF DIRECTORS MEETING SUMMARY REPORT

The Association of Environmental & Engineering Geologists (AEG) Directors convene meetings biannually to review the status and conduct the business of our organization. On September 26th and 27th, 2009, the Board of Directors (BOD) Meeting was held in Stateline, Nevada, the site of the AEG Annual Meeting. Detailed meeting minutes were prepared and will be provided for BOD acceptance at the next Mid Year Board Meeting, which will take place in St. Louis, Missouri, on May 1st and 2nd, 2010. The following summary was prepared to assist our Directors in highlighting major issues and topic areas for communication to the general membership. Each Director is invited to report those items that most pertain to their Section.

The AEG's Board of Directors (BOD) is comprised of the twenty-five (25) Section representatives and five (5) Executive Council members, totaling thirty (30) Directors. Twenty (20) Section Chairpersons or their proxies were present along with the Executive Council (EC): President Kreuger, Vice President/President-Elect Hilton, Treasurer Bauer, Secretary Morris, and Past-President Molinari, achieving the required majority present for a quorum. Chief Operating Officer Roland was also present, as were Governance Committee Chair Andrews, Finance Committee Chair Bieber, Strategic Planning Committee Chair Hale, Communications Committee Chair Shaw and other invited guests. Sections absent were New England, New York-Philadelphia, Montreal, Lower Mississippi Valley and South Africa.

★ President Kreuger discussed his planned Section visits for the coming year and informed the Board that he would welcome invitations to visit Sections and Chapters. He plans to present on a topic related to Environmental Geology.

★ Vice President Hilton discussed his planned involvement in coordinating the efforts of the existing operating committees (Strategic Planning, Governance, Section/Chapter Support, Advocacy, Students/Young Professionals, Licensure and Website). In addition, Vice President Hilton will oversee the formation of three new operating committees (Continuing Education, Education, and Advertising).

★ The BOD voted to accept the auditor's report prepared by Anton, Collins, Mitchell, LLP for the Financial Statements, year ending June 30, 2008. Vice President Hilton noted that the Treasurer's Reserve Account has performed better than the index markets (DJIA and SP500), down only 12%. The account is also rebounding at a rate of approximately 8%, and continued growth is expected based on our conservative investment strategy which is consistent with prior BOD direction. The BOD

also provided direction to reallocate approximately \$50,000 of cash held in the Treasurers Reserve to the Money Market Account.

★ Vice President Hilton reported that AEG is currently operating at a \$26,000 surplus through the second quarter of 2009. This is based on AEG taking in approximately \$12,000 of additional revenue and expending \$14,000 less than budgeted.

★ The 2009 Annual Meeting in South Lake Tahoe generated a surplus in excess of \$50,000. The final Annual Meeting Report will be presented at the next Board Meeting, held in May 2010.

★ Chief Operating Officer Roland reported that AEG membership is down approximately 10% from 2008. In order to recruit new members and invigorate the membership, a membership drive is underway. The top two AEG members that recruit the most new members by the end of the year will receive a free round trip ticket on Alaska Airways or a free round trip ticket on Southwest Airlines, respectively. These two round trip tickets were donated by current AEG members in an effort to support the membership drive.

★ AEG will focus on sponsors and exhibitors for next year. Exhibitors that commit to the 2010 Annual Meeting by the end of October 2009 will receive a \$100 discount.

★ The AEG Special Publication "Living with Unstable Ground" is available for purchase and sale at the Section level. Contact COO Roland for more information.

★ AEG will focus on retaining and recruiting sponsors and exhibitors for next year. 2009 Annual Meeting Exhibitors were contacted by CEO at the meeting and notified that if they commit to the 2010 Annual Meeting by the end of October 2009, they will receive a \$100 discount.

★ AEG is looking for volunteers to staff the AEG booth at Geological Society of America (GSA) Conference in Portland, Oregon.

★ Past President Molinari discussed his activities from the previous year. Key highlights were visits to Sections, Chapters, and Student Chapters, representing AEG at the GSA and ARMA Annual Meetings, and participating in two AGI Congressional Visit Days and associated meetings. He encouraged AEG members to participate in the AGI Congressional Visits. AEG is able to provide some funds to support member travel to Washington D.C. AEG Foundation BOD Member, Bob Tepel, presented the AEG Foundation Report. Key developments within the Foundation include:

The establishment of the new Beardsley-Kuper Fund that provides Scholarships for students attending summer field camps.

Goals of the Foundation for the coming year are to increase the percentage of the AEG Membership donating to the foundation; build sustainable funding; and expand planned giving.

(Continued on page 13)

(Continued from page 12)

The Foundation and AEG presented six Lemke Awards to students presenting research at the Annual Meeting.

The BOD voted to remove the permanent restriction from the original donation made to establish the Marliave Fund. This was done at the request of the AEG Foundation Board to lessen the financial burden from additional reporting and accounting required for restricted funds.

- ✦ The BOD approved nominating Scott Burns for International Association of Engineering Geologists (IAEG) President in 2010.
- ✦ AEG supports Engineers Without Borders (EWB) and encourages members to contact EWB at the local Chapter level to learn about opportunities: www.ewb-usa.com.
- ✦ President Kreuger requested that names of potential members for the Executive Council be sent to Past President Molinari, Chair of the Nominations Committee.
- ✦ Advocacy Committee Chair Rick Kolb suggested the creation of an Outstanding Section Newsletter Award. He will begin work on a formal proposal and criteria to be presented at the 2010 Mid-Year BOD meeting.
- ✦ The Advertising and Exhibitors Committee is newly formed and will be appointing Chairs in the coming weeks.
- ✦ The Continuing Education Committee is newly formed and will be appointing Chairs in the coming weeks.
- ✦ A new Ad-Hoc Education Committee is newly formed and will be chaired by Keith Turner. This committee will focus on creating a Bodies of Knowledge Document for the Applied Geosciences. This Committee will most likely change their name to avoid confusion with the Continuing Education Committee.
- ✦ Strategic Planning Chair Paul Hale presented the Strategic Planning Report and informed the BOD that the focus of the Committee will be on completing individual projects in order to keep volunteers engaged and involved in the projects in which they are most interested.
- ✦ The BOD voted to approve and support the new Strategic Plan, available on the AEG Website. Members are encouraged to contact Paul Hale (phale@gfnet.com) if they are interested in volunteering to complete the goals of the plan.
- ✦ The Annual Meeting Committee will be focusing on expansion, including members of past and future Annual Meeting Planning Committees.
- ✦ Website Committee Chair Dale Andrews presented a mock-up of the new website and emphasized that the goal of the new website will be to streamline the information transfer process and provide a dynamic tool for the membership. Key features will include discussion forums, enhanced advertising capabilities, current news feeds, and events calendar.
- ✦ The Licensure Committee will continue as an Ad-Hoc

committee pending the approval of their Charter at a future date. The Licensure Committee is currently Chaired by Charles Nestle, M-SC.

✦ The Student/Young Professional Support Committee (SYSPSC) encouraged all Section Chairs to become members of "New Geologist" Facebook page. The Section Chairs and their members are invited to contact SYSPSC if they are interested in participating in the Visiting Professionals Program.

✦ Section/Chapter Support Committee (S/CSC) Chair Kathy Troost informed the BOD that the Section Officer Handbook is complete and will be provided to Sections for their use. The intent is for the Handbook to be a living document that will be updated continually as Section responsibilities change.

President Kreuger discussed the progress for the future Annual Meetings;

2010 – Charleston, South Carolina – Meeting Chair Bridget Doyle provided a PowerPoint presentation of next year's Annual Meeting. The presentation is available to all Section Chairs for use at their meetings this year.

2011 – Anchorage, Alaska – AEG will be holding monthly conference calls with Meeting Chair Paul Metz to assist with the planning of this meeting.

2012 – Salt Lake City, Utah – The new Hilton Hotel has been chosen as the venue for this meeting.

2013 – Seattle, Washington – The meeting venue has been narrowed to two hotels and the Special Event will most likely be held at the Space Needle.

- ✦ Annual Meeting event insurance was discussed.
- ✦ Formal Reports for the two Shlemon Conferences held in 2009 will be available shortly and the presentations from the conferences may be posted on-line. The Texas Section submitted a proposal for hosting a Shelmon Conference on Coastal Subsidence.
- ✦ AEG will continue work on the application process for the 2018 IAEG meeting. Intentions are to propose to host the meeting at a city on or near the West Coast.
- ✦ AEG is continuing to work with the Canadian Geotechnical Society to host a future International Landslide Conference.
- ✦ Past-President Molinari provided the BOD with an update on the Joint Task Force document that is being prepared by the AEG, the American Institute of Professional Geologists (AIPG), and the American Society of Civil Engineers – GeoInstitute (ASCE-GI). Based on the discussion at the forum held on Friday at the Annual Meeting, AEG plans to have further discussion with ASCE GI regarding basing the document on a more comprehensive and consistent Bodies of Knowledge (BOK) considering the existing ASCE (2008) document, existing documents from WA, OR and CA geologist licensing boards (and other states if available), and a draft document prepared by Keith Turner for an international consortium of engineering geology and geotechnical societies. Also

(Continued on page 14)

(Continued from page 13)

plan to discuss whether other entities should be included in the process. If, after this discussion, the joint decision is to proceed with the revision process for the current draft document, then the committee specified by the BOD at the Mid-Year Board Meeting will be tasked with addressing the comments of the Association in a redline version of the draft document to be submitted to ASCE GI and AIPG. No firm revision process or schedule has been jointly determined at this time.

★ The BOD approved the allocation of \$10,000 from AEG to the AEG Southern California Political Action Fund for the California Association of Professional Geologists (CAPG) to use in their efforts to ensure that California licensed geologists and the licensing program are supported by a State Board that will provide adequate representation.

★ President Kreuger talked about the EC's discussions with the CAPG regarding an AEG in-kind donation of funds to distribute the Call to Action to the California licenses who are not AEG Members, and this effort would include a return envelope for donations. The EC has a spreadsheet of all California licensees, but the EC is not sure how many mailers would go out at this time. The consensus of the BOD was to support this action.

★ The BOD approved the new Conflict of Interest Pol-

icy and Signature Form. All BOD representatives and Committee members are required to complete the form.

★ The BOD approved the new Copyright Policy for all AEG publications and the Website.

★ The BOD approved the minutes from the 2009 Mid-Year BOD meeting held in Seattle.

★ Treasurer Bauer updated the BOD on the Geology of the Cities of the World Special Publication. The intention is to publish up to 80 papers in an additional volume in electronic format. The Cities Committee will be working with the Communications Committee to establish a protocol for reviewing and publishing papers in the E&EG Journal as well.

★ Secretary Morris presented a brief summary of the Electronic Publishing survey results. General consensus is that 70 percent of respondents were in favor of moving the Journal to electronic publishing, 20 percent were opposed, and 10 percent offered no firm opinion. The BOD authorized the Executive Council and Communications Committee to move Environmental & Engineering Geoscience to both electronic publishing with the understanding that print copies would be provided to members that request them for the 2010 calendar year.

★ Communications Committee Chair Allen Shaw discussed the print media of AEG. He requested that Sections

(Continued on page 15)

Geobruigg protects people and infrastructure from the forces of nature.

Our tested static and dynamic protection systems protect against rockfall (up to 10.6 ton block impacting at 56 mph) and unstable slopes, as well as debris and mud flows.

Discuss your natural hazard problems with Frank Amend, your local Geobruigg sales engineer, at the contact information provided below.



Geobruigg
North America, LLC
PO Box 7453
Rocky Mount, NC 27804-0453
(T) 252-937-2552
(C) 252-904-6986
frank.amend@geobruigg.com
www.geobruigg.com



(Continued from page 14)

ask their members to submit technical papers or case studies to the Environmental & Engineering Geoscience Journal. There will be several papers in a future issue of the journal by speakers at the Shlemon Specialty Conference on Fault Rupture that was held in Southern California in February 2009. There is also the potential for a Special Publication from the conference proceedings and papers. Shaw would like to increase advertising in the AEG NEWS in order to add more color photos and enhance the quality of the publication.

- ✦ The BOD voted to approve the Environmental & Engineering Geoscience Editor's Report

- ✦ In addition to presenting the Finance Committee report, Finance Committee Chair, David Bieber, reminded the Board of its fiscal responsibilities and how the committee helps to meet those responsibilities. The BOD approved the nomination of James May and John Pfeiffer to the Finance Committee. The BOD also approved the Finance Committee Report as presented.

- ✦ During lunch each Section was asked to answer three questions: 1) What is working for your Section? 2) What activities need improvement in your Section? 3) What committee(s) are you on or would you like to be on? Answers will be posted with the minutes of the meeting.

- ✦ Treasurer Bauer presented the 2010 AEG Budget,

which shows a small surplus. The format of the budget categories was reviewed and a brief synopsis of the year to date actual financial performance versus budget was discussed. The differences between the 2009 and proposed 2010 budget were presented. Following the presentation the BOD voted to approve the 2010 Budget as presented.

- ✦ The BOD voted to accept the Governance Committee (GC) Monitoring Report from the 2009 Mid-Year BOD Meeting in Seattle as presented.

- ✦ GC Chair Andrews addressed the topic of Sections using long-term proxies to represent them at BOD meetings. Several Sections that have not regularly attended BOD meetings have expressed interest in this idea and the GC will begin to evaluate the feasible alternatives to complete this task.

- ✦ The BOD voted to approve the nomination of Cynthia Palomares and Aubrey "Pete" Henley to the GC.

- ✦ The BOD voted to approve the Journalism Award criteria as presented.

- ✦ The BOD voted not to approve the Outstanding Environmental and Engineering Geology Award criteria as presented and this will be re-evaluated and a revised criteria presented for approval at the May 2010 BOD meeting.

- ✦ COO Roland requested the BOD inform her of indi-

(Continued on page 22)



<http://www.trs-environmental.com>

We provide a wide variety of environmental monitoring, sampling,
field and safety supplies for rent, lease or sale.

Susan Boutwell TRS@trs-environmental.com
1830 West Airfield Drive, P.O. Box 619260,
Dallas-Ft. Worth Airport, TX 75261

Phone: (972) 456-4000

Fax: (972) 456-7011

EDUCATION SECTION

GIVEAWAY HAS THANKFUL TEACHERS LINED UP IN GREENSBORO

AEG Carolinas sponsors have received thank you cards from North Carolina teachers and students for the 450 Earth Science Tool Kits we gave away at the North Carolina Science Teachers Association (NCSTA) Annual Professional Development Institute on November 19-20, 2009 in Greensboro. The Tool Kit Giveaway was held in conjunction with other educational giveaways, notably those of the North Carolina Aggregates Association's Rock Kits (a collection of 15 bags of sample rocks with a description) and the NC Department of Environment and Natural Resources booth (maps and educational resources from North Carolina).

The Tool Kits are a teaching aid designed and produced by the American Geological Institute (AGI), and their distribution at NCSTA was one of the educational projects of AEG Carolinas in 2009. The Tool Kits are geared toward giving science teachers resources to teach earth science to school children from kindergarten through high school, and to encourage students to think about the world around them.

Although Earth Science Week was in October, the NCSTA meeting was an outstanding venue to distribute these Tool Kits to science teachers from North Carolina, so this was our Earth Science Week project for 2009. The funding for this project comes from the following generous sponsors. AEG and the NC teachers and students are very grateful for your support!

Platinum Sponsors (\$500-\$2000)

Ground Water Professionals of North Carolina (GWPNC)
AEG Southeastern Section
Geology Executive Online (GEO)
AEG Carolinas Section (including our own sponsors—see pages 37 and 38)

Gold Sponsors (\$100-\$499)

Dr. Charles W. Welby
Enviro-Equipment, Inc.

Silver Sponsors (\$10-\$99)

Jennifer Bauer
EGIS, Inc.
Paul Weaver
Tim Leatherman
Mark Denil
Dick and Jane Shaler
Tami Idol



Teachers line up to receive rock kits from NCAA's Diane Weems and Tool Kits from AEG Carolinas' Jane Gill-Shaler and Tami Idol at the NCSTA Annual Conference in Greensboro.



ENGINEERING, INC.

Joyce Engineering, Inc. is a full-service consulting firm. We provide engineering & environmental solutions to private & public clients throughout the Southeastern United States.

Hannu Kemppinen, Client Services Manager
Joyce Engineering, Inc., 2211 W. Meadowview Road
Greensboro, NC, 27407
phone and fax: (336) 323-0092

hkemppinen@joyceengineering.com

EOS Remediation



NATURAL, SCIENCE-DRIVEN SOLUTIONS

- Patented Methods for *In Situ* Bioremediation
- Featuring AquaBupH™ for Optimal Immediate and Long-Term Dechlorination with *In Situ* pH Adjustment

Please call for a consultation ► ► ►

Bioremediation Products • Technical Support
Tel: 888.873.2204 • www.EOSRemediation.com

SECOND BIENNIAL SOUTHEASTERN IN SITU SOIL AND GROUNDWATER REMEDIATION CONFERENCE

Redox Tech, the Association of Environmental and Engineering Geologists (AEG), and the Groundwater Professionals of North Carolina (GWPNC) have finalized the program for the Second Biennial Southeastern In Situ Soil and Groundwater Remediation Conference on February 23 and 24th 2010 in Raleigh, North Carolina. The conference will provide a forum for providing the state of the art for a wide range of in situ remediation technologies.

On the first day of the conference, recognized speakers from around the country will present on their area of expertise. On the second day, case studies will be provided by consultants and vendors on the application of emerging technologies, with lessons learned. The Conference should provide a valuable opportunity for groundwater professionals to keep abreast of recent developments in remediation technologies, while potentially earning continuing education credits.

The cost of registration for the conference is \$250, and the registration includes continental breakfast, snacks and lunch. Members of the Groundwater Professionals of North Carolina, Association of Environmental and Engineering Geologists, students, and faculty receive

a \$50 discount on registration. State of North Carolina employees should call to receive a reduced rate. Each participant is responsible for their own dinner and lodging.

Redox Tech is the promoter and main sponsor of the conference and is not directly profiting from the conference. The cost covers direct costs such as the conference room, lunch, beverages, snacks and A/V equipment rental. Participation is limited to the first 300 registrants. Registration is fully refundable up to two weeks prior to registration, less an administrative fee of \$25. If you cannot attend, your registration may be transferred to another participant. Single day registrations are not available.

The conference is being held at the Renaissance Marriott Hotel at North Hills, 4100 Main at North Hills Street, Raleigh, North Carolina. The hotel is located at Exit 8 off the I-440 Beltline. A block of rooms has been reserved at a discounted pre-registration rate of \$149 per night. The block of rooms is being held until February 2nd, 2010. Go to <http://www.marriott.com/hotels/travel/rdrn-renaissance-raleigh-hotel-at-north-hills/>

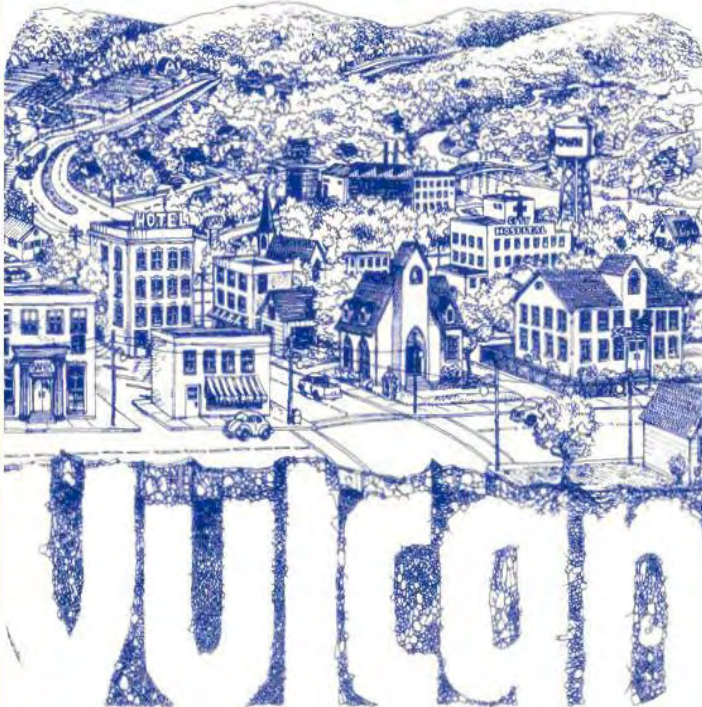
to-

Date=2/24/10&groupCode=REDREDA&fromDate=2/22/10&app=resvlink

and check availability, and the discounted rate will appear. There are other hotels located in the area, but if you will need a room, reserve one because hotels in the area have limited availability.

For booth registration information, please contact John Haselow at Redox, 919 678 0140. The complete program flyer is on pages 34 and 35 of this issue.

Foundations of the community.



Vulcan
Materials Company

*The nation's leading producer
of crushed stone.*

Mideast Division

4401 Patterson Avenue
Winston-Salem, NC 27105
336.767.4600

www.vulcanmaterials.com

EDUCATION SECTION

JAHNS 2010 LECTURER PAUL MARINOS' BUSY SCHEDULE

Paul Marinos, the 2010 Richard H. Jahns Distinguished Lecturer, has a daunting schedule lined up for the southeastern states for February. At this time, the topics have not been decided by the students, but you can see that Dr. Marinos will have to do a lot of traveling. He will be ferried from place to place by volunteers from AEG Carolinas and students from the universities.

Monday, February 1, 2010
Virginia Tech; Blacksburg, Virginia
Tuesday, February 2, 2010
Radford University; Radford, Virginia
Wednesday, February 3, 2010
Appalachian State University; Boone, North Carolina
Thursday, February 4, 2010
East Tennessee State University; Johnson City, Tennessee
Friday, February 5, 2010
Western Carolina University; Cullowhee, North Carolina
Tuesday, February 9, 2010
College of Charleston; Charleston, South Carolina
Wednesday, February 10, 2010
University of South Carolina; Columbia, South Carolina
Thursday, February 11, 2010
Furman University; Greenville, South Carolina
Friday, February 12, 2010
University of North Carolina; Charlotte, North Carolina

For more information about the Richard H. Jahns Distinguished Lecturer Series, contact Rick Kolb, RA-Kolb@mactec.com.

CHARLOTTE TEACHER IS WINNER OF 2009 AGI AWARD FOR EXCELLENCE IN EARTH SCIENCE TEACHING

Stephen L. Houser, Jr., Gifted and Talented Educator at Providence Spring Elementary School in Charlotte, North Carolina has been named the 2009 recipient of the Edward C. Roy, Jr. Award for Excellence in K-8 Earth Science Teaching. Mr. Houser, who has taught grades 3-5 for most of his 34-year teaching career, is a North Carolina certified environmental educator who currently serves as a Talent Development Teacher, instructing gifted and high ability students in all curricular areas including earth and planetary science topics.

Mr. Houser is active in various organizations promoting environmental and earth science education. He is a life member of the Environmental Educators of North Carolina, a member of the National Science Teachers' Association, a youth director and board member of the national environmental education program Family Nature Summits, and an Educator of Excellence with the North Carolina Museum of Natural Sciences.

Diane Adams, principal of Providence Spring Elementary School, says that Mr. Houser is an "education legend here in the Charlotte-Mecklenburg Schools" who is a science educator "24 hours per day, seven days a week, 365 days a year." In addition to the many individual students Mr. Houser has inspired to pursue careers in earth science, he has been active in shaping the curriculum of his school and school district—promoting the development of outdoor classroom sites and opportunities on his school grounds as well as at neighboring schools, coordinating a Science Olympiad program, and serving on his school district's science committee.

Mr. Houser has been invited to attend the Winter meeting of AEG Carolinas Section meeting in Concord. See page 4 of this newsletter for details.



CHOICE RENTALS & SUPPLY SALES
ENVIRONMENTAL SERVICES

WATER QUALITY, WATER SAMPLING, AIR MONITORING,
& SOIL SAMPLING

WWW.CHOICE-ENVIRO.COM

NICOLE MANNING
919-369-1001 (DIRECT)
919-363-6890 (FAX)
NICOLE@CHOICE-ENVIRO.COM

WE ALSO RENT THE KAWASAKI MULE 3010
TRANS 4X4 XUV!

BACKPACK & HANDHELD GPS, GEM 2000, TVA 1000B, SURVEY
EQUIP., GENERATORS, LAPTOPS, ANEMOMETERS, MONSOON
PUMPS, PERISTALTIC PUMPS, BLADDER PUMPS & NOISE
DOSIMETERS & LOTS LOTS MORE!

YSI
HORIBA
RAE
IN-SITU
PHOTOVAC
ISCO
LAMOTTE
QED
QUEST
TSI
LANDTEC
TRIMBLE
SOLINST
PROACTIVE

Stop Guessing... Know What's Down Inside Your Well

Water well
video,
analysis, and
repair

Geophysical
Surveys

EGIS, PA

Mike L. Vaught, PG, CWC

(919)929-8363
441 Northside Dr.
Chapel Hill, NC 27516
gwinvest@juno.com

(Continued from page 11)

“lobbying”). At the time the letter was written a sum of approximately \$1300 existed in the legislative account. There was an immediate need for additional funds.

On May 4, 1983, George Bain, President of the Carolinas Section of AIPG and acting as Chair of the Steering Committee, sent out a letter summarizing the history of the development of the Geologists Licensing Bill and a copy of the Bill to be submitted to the 1983 Legislature within a couple of weeks. The Bill had been edited during March and April by Johnson, Shearon, and Gamble to conform to the North Carolina Legislature format and to reflect the comments and suggestions received from both the Geologic Community and the Engineering Community. During this period members of the Steering Committee and others met one or two times with George Hearn of Johnson, Shearon, and Gamble to discuss the changes in the Bill.

Enclosed in the letter was a listing of Representatives and Senators of the N.C. Legislature. A request was made of those receiving the letter to contact their Representative and Senator to express personal views on the Bill (“pro or con”). George expressed in his letter his view that the Bill was consistent and fair and that it had addressed most of the concerns expressed by the geologic community.

Also accompanying the letter was a three-page

“Rationale for the Geologists Registration Act.” The document discussed the Purposes of the Act, The Role of Geology in North Carolina, and the Benefits of the Act to North Carolina. Thus began the “voyage” toward the goal of the passage of the Geologists Registration Act.

(To Be Continued)

Once again I express my appreciation and thanks to Neil Gilbert for reviewing versions of this GeoRamblings manuscript and for his pertinent comments and advice.

Charles W. Welby

Dr. Charles W. Welby is a former Section Chair for AEG Carolinas and a regular contributor to this newsletter. He



ROBERT "BUTCH" STEVENS
VICE PRESIDENT

PO BOX 1029, 501 MILLSTONE DRIVE, HILLSBOROUGH, NC 27278
(919) 644-2814 (800) 627-7920 FAX (919) 644-2817
bstevens@pwinc.com www.pwinc.com
EAST SYRACUSE, NEW YORK (800) 782-7260
ENVIRONMENTAL AND GEOTECHNICAL DRILLING SERVICES



Pine Environmental Services, Inc.

THE ENVIRONMENTAL SUPPLY & SUPPORT PEOPLE
RENTALS - SALES - REPAIRS

WWW.PINE-ENVIRONMENTAL.COM



The Leading Supplier of Environmental Monitoring, Environmental Sampling and Safety Supplies

Ask us about free delivery and pick-up in your area

Toll Free: (866) 646-PINE (7463)

email: Pine-NC@Pine-Environmental.com

For After Hours Emergency needs Call

Paul Federline (919) 333-6287

Dedicated to Quality and Customer Satisfaction



AEG•2010 53rd Annual Meeting

Charleston, SC
Historic Francis Marion Hotel
September 20 – 25, 2010



Come and enjoy our low country hospitality! Join us for a week of education, networking and fun in Charleston! AEG•2010 features short courses, field trips, technical sessions, symposia, and more!

About Charleston ...

Southern hospitality, beautifully preserved historic district, famed golf and tennis resorts and a stunningly picture-sque location will ensure AEG's 53rd Annual Meeting in Charleston is both productive and memorable in this charming treasure by the sea.

About the Historic Francis Marion Hotel...

Francis Marion Hotel in Charleston has been at the heart of the city's social, business, and community life since opening in 1924. Experience unsurpassed views of the historic harbor at the Francis Marion Hotel, the only high-rise hotel in Charleston's historic district. All 230 guest rooms are tastefully furnished for today's sophisticated traveler, and provide modern conveniences. Enjoy a wonderful night's sleep surrounded by heavenly, European-style bedding with overstuffed duvets and down pillows.

Technical Sessions...

- Coastal Issues
- Charleston Geotechnical and Geoenvironmental Engineering
- Geophysics
- Landslides/Slope Stability
- Seismic Hazards
- General Geologic Hazards
- Groundwater/Hydrogeology
- Professional Practice in Engineering Geology
- Dams
- Global Warming and Sea level Rise
- Soil and Rock Mechanics
- Professional Practice in Environmental Geology

Symposia...

- Military Geology
- Updated Charleston Seismic Source (NRC)
- Effects of 1886 earthquake on other S.C. work (HAZUS)
- State Geological Surveys Addressing Seismic Hazards
- Discussion of the historic 1886 Charleston Earthquake
- Liquefaction Mapping in South Carolina
- Geophysical Applications in Engineering and Environmental Geology
- Ravenal Bridge Engineering Geology
- Remediation of Charleston Aquarium Site
- Coal Slurry Impoundment Failure at TVA's Kingston, Tennessee Coal Plant
- Coastal Issues: Carolina Bays
- Landslide Causes and Effects
- Interplate Earthquakes and New Madrid Quake
- And more....

Field Trips...

Appalachians to the Atlantic: Overnight trip from North Carolina Mountains to Charleston. Includes stops at landslides in NC along the Blue Ridge Parkway and near Lake Toxaway, a pumped storage project in Western SC, and a reclaimed gold mine in central SC.

Savannah River Site Visit: 1 day trip to SRS hosted by the Savannah River National Laboratory and SRS Area Completion Projects. Trip will discuss history of Savannah River Site, the waste site closure, and environmental remediation.

Coastal Processes Trip: 1 day trip to local barrier islands led by Miles Hayes. Trip will focus on the dynamic coastal processes acting on the actively migrating barrier islands of Seabrook and Kiawah just south of Charleston.

Charleston Earthquake Walking Tour: 3-4 hours, may run several during meeting as both field trips and guest tours. Shows and discusses evidence of 1886 M7 Charleston Earthquake on structures in downtown Charleston.

Macroeffects of the 1886 Charleston Earthquake: 1 day trip led by Pradeep Talwani, University of South Carolina. Will explore evidence and effects of the 1886 Charleston earthquake and paleo-earthquakes throughout the Charleston Region, including structural damage, 1886 and paleo-liquefaction evidence, and other earthquake-induced features.

Professional Development Short Courses...

Courses proposed include Introduction to HAZUS-MH, Geophysical Applications in Environmental and Engineering Geology, Soil and Groundwater Geochemistry, and Rock Core Logging for Engineering and Environmental Projects.

Guest Tours...

Charleston Tea Plantation: only working tea plantation in US

Picnic and Shelling at Edisto Beach: famous sea shell collecting location on Edisto Island, a barrier island south of Charleston.

Fort Sumter / Patriots Point Tours: Site of the opening shots of the Civil War and Patriots Point Naval and Maritime Museum.

Gullah Tour of Charleston: Language, place, history and stories of the Gullah-Geechee community.

Plantation Tours: tours of local plantations may include Boone Hall and Magnolia Plantation and Gardens.

Charleston Cooks! Cooking class with top local chefs focusing on Lowcountry (local) cuisine.

Special Event...***Evening on the USS Yorktown***

Our special event will feature tours of the *USS Yorktown* and the Congressional Medal of Honor Museum, and dinner/entertainment on board the ship. The World War II aircraft carrier YORKTOWN, all 888 feet of her, is the flagship of the fleet at Patriots Point Naval & Maritime Museum. Patriots Point features 25 aircraft ranging from the fighters and bombers of WWII up to a modern F-14 Tomcat. Sit in the cockpit of an F-9 Cougar, the first model used by the fabled Navy Blue Angels. Plus, strap in and hold tight inside our Navy Flight Simulator. Then, head to the bridge of the carrier with its commanding view of Charleston Harbor and take the actual wheel of this massive, floating city of steel. Feel what life was like for the more than 3,000 sailors who lived, fought, and died in epic Pacific battles. See where Japanese Kamikazes slammed into YORKTOWN. Overnight, young boys became fighting men and in moments of greatness, became national heroes. Their stories are told in the Congressional Medal of Honor Museum onboard YORKTOWN. Visit www.patriotspoint.org for more information.

For Specific Information, Contact the Appropriate Committee Chair...***Committee Chairs******Meeting General Chair***

Briget Doyle, doyleb@cofc.edu

Meeting Vice-Chair

Norm Levine, levinen@cofc.edu

Field Trips

Jennifer Bauer, jennbbauser@gmail.com

Field Trip Guidebook Editor

Jane Gill-Shaler, janehrill@aol.com

Finance

Rick Kolb, rakolb@mactec.com

Hospitality Area and Guest Tours

Madelyn Adams, mrads@edisto.cofc.edu

Moderator

Alex Rutledge, frutledge@schnabel-eng.com

Outstanding Environmental & Engineering Geologic Project

Raymond Knox, rknox@schnabel-eng.com

Publicity

Gary Rogers, grogers@schnabel-eng.com

Short Courses

Dave Duncklee, dave@dunckleedunham.com

Matt Cooke, mccooke@mactec.com

Special Event

Rick Kolb, rakolb@mactec.com

Sponsors

Jane Gill-Shaler, janehrill@aol.com

Student Coordination

Norm Levine, levinen@cofc.edu

Teachers Workshop

Carin Kromm, clkromm@mactec.com

Technical Program and Symposia

Paul Weaver, pweaver@kkinfelder.com

Meeting Committee Blog

Madelyn Adams, mrads@edisto.cofc.edu

Meetings Manager

Colorado Event Organizers, Inc. (CEO)

Heather Skladanowski, meetings@aegweb.org

Notes: Program, schedules and events are subject to change. See the Annual Meeting issue of the AEG NEWS (July 2010) for a complete schedule, program updates, and registration form. This special issue of the AEG NEWS will incorporate the Abstracts and Program book formerly published separately. AEG members who register early are eligible for both the member discount and the early registration discount. Please register early for the meeting and register for every fee-based function or event that you want to attend. Because of cancellation contracts in our vendor contracts, field trips, short courses and spouse/guest events are subject to cancellation based on insufficient early registration. We regret that we cannot hold under-subscribed events open to accommodate late and on-site registrations. Help us avoid disappointing you with event cancellations – register early!

Call for Technical Papers
Abstract Deadline:
April 1, 2010

Online submittal at www.aegweb.org
 Contact Heather Skladanowski at
 1.877.236.0411 or meetings@aegweb.org



(Continued from page 15)

viduals in their Sections that would be willing to serve as "Experts" on particular environmental and engineering geology subject areas. The "Experts" must be available to provide quick responses to requests for information from various media outlets and legislators' staff.

✦ The BOD voted to approve the formation of the North Carolina State Student Chapter.

✦ Kathy Troost and Marie Marshall Garsjo led the BOD and guests in the S/CSC workshop. The workshop was intended to assist Sections and Chapters in becoming more active and productive. The workshop was formatted to allow different Section Chairs to interact in Break-Out Groups to discuss strengths and opportunity areas for improvement.

✦ The new Action Items were discussed with the BOD.

✦ The BOD supported the idea of conducting an Advertising and Sponsorship workshop at the Mid-Year BOD Meeting.

The next BOD meeting will be held May 1st and 2nd, 2010 in St. Louis Missouri.

GSA ANNOUNCES SYMPOSIUM ON ASBESTOS AT JOINT NORTHEAST-SOUTHEAST MEETING

The joint meeting of the Northeast/Southeast sections of GSA will be held March 14-16, 2010 in Baltimore. For those of you interested in attending, one of our members - Catherine Skinner at Yale - is running a session in Geology and Health and is soliciting contributions. The submission deadline is December 8th. Details are listed below.

The Geology and Health Division of the Geological Society of America (GSA) is holding a symposium on "Asbestos: Past, Present, and Future" at the joint Northeastern-Southeastern Sectional meeting of GSA to be held in Baltimore, MD, 14-16 March 2010 (abstract deadline - 8 December 2009).

This session will discuss and overview asbestos minerals, including problems of identification for researchers and regulators, as well as common perceptions. Get up-to-date scientific information useful for mineralo-

(Continued on page 23)

NICHOLSON

a SOLETANCHE BACHY Company

At Nicholson, we specialize in versatile geotechnical solutions for deep foundations, earth retention, ground treatment and ground improvement. When your project requires proven performance and technical innovation, build on us.

- | | |
|-------------------|----------------------|
| ■ Micropiles | ■ Anchors |
| ■ Grouting | ■ Augercast Piles |
| ■ Soil Nail Walls | ■ Soil Mixing |
| ■ Diaphragm Wall | ■ Vibro Technologies |

Nicholson Southern District
P.O. Box 7
2117 Immel Mine Road
Mascot, TN 37806
865-933-3111 Phone
865-933-1652 Fax
nicholsonconstruction.com

BUILD ON US



800-779-8854 / ContactUs@aedi.biz
NC, SC and VA Licensed and Certified
WWW.AEDI.BIZ

For All Your Drilling Needs

***Environmental - Geotechnical
Auger, Mud Rotary, Air Rotary, Geoprobe***

***Certified NC DOT "DBE" Women Owned Business
and HUB Corporation***

(Continued from page 22)

gists/geologists, as well as individuals responsible for community decisions who know this as an expensive hazard. For further information contact Dr. Catherine Skinner, Chairman of the G&H Division of GSA at: catherine.skinner@yale.edu. She will be happy to discuss any potential contribution to the symposium with you.

The GSA website is <http://www.geosociety.org>. Click on "meetings", then scroll down to the Northeastern-Southeastern Sectional Meeting and click on "abstracts form". When this page comes up, click on "Symposia", if you are submitting an abstract for the Asbestos symposium. If you want to do an abstract on a different health related subject, click on "General Discipline Sessions", and when this page comes up click on the arrow in the "A" window of "Select a Discipline"; highlight "Geology and Health" in the menu that appears; and then simply follow directions. Or use one of the other sections. Your abstract will then go to the appropriate section for inclusion in one of the GSA sessions.

ANNOUNCEMENTS

A&D Environmental Services, a leading provider of environmental and industrial field services, is pleased to announce Scott Pearce as Director - National Accounts. Scott's brings tremendous knowledge and expertise from his 24 years industry experience of providing comprehensive environmental and industrial services. He has served a wide range of markets including industrial and commercial operations, government agencies, and environmental engineering and consulting groups. A & D is an AEG Carolinas Section Silver Sponsor.

Scott joined the A & D team as a sales rep in 2001 with 15 years experience in the environmental field, and was promoted to VP of Sales in 2005. He has been part of the transition group with past acquisitions. Scott will now lead our team in the National Accounts program, working from our High Point, NC location.

Paul Taveira, CEO of A&D, states "Scott's knowledge of our industry is a tremendous asset to our organization. His experience will mesh perfectly with our plans of future growth and regional expansion. We are excited to have Scott in his new role and he will continue

(Continued on page 24)

Rentals








Enviro-Equipment, Inc.

Leading Supplier of Quality Environmental
Equipment and Supplies
1-888-274-8929

Sales






Remediation

FREE LOCAL PICKUP AND DELIVERY

TO RECEIVE OTHER SPECIAL OFFERS AND DISCOUNTS

CALL 888-274-8929 TO SIGN UP FOR OUR NEWSLETTER!

WE ARE A PROUD SPONSOR OF THE AEG
CAROLINAS SECTION

SPECIALTY PRODUCTS FOR:

Water Quality Analysis • Organic Vapor Analysis • Noise Monitoring • Indoor/Outdoor Air Quality
Particulate Monitoring • Gas Detection • Ground-Water Pumps • Sampling Supplies • Tubing
Disposable Bailers • Disposable Nitrile & Latex Gloves • Health & Safety Supplies
Storm Water Sampling • Remediation Pilot Test Systems • Soil & Ground-Water Remediation

Call us toll free at:

888-274-8929

Send us an e-mail at:

rand@enviroequipment.com

Visit our on-line catalog at:

www.enviroequipment.com

(Continued from page 23)

to make an impact with the company".

Scott has helped change the culture at A&D in establishing a team of professionals that has provided high quality, cost effective solutions to our clients' environmental and industrial needs. A&D Environmental uses highly trained employees, advanced technology, stringent safety procedures and competitive pricing to consistently deliver exceptional environmental & industrial services.

Scott can be reached at spearce@adenviro.com and 336-803-1783. A&D Environmental is a full-service environmental and industrial field services provider offering a wide range of services throughout the Southeastern United States. More information can be found at www.adenviro.com, or from J. Scott Pearce, Director, National Accounts, P.O. Box 484, High Point, North Carolina 27261, 336.434.7750 office

The 2010 GeoCorps positions are now open for application through the new online application system. View the list of 65 geoscience positions and apply today - you may apply for up to three positions. If you have been a GSA GeoCorps Participant in the past, you are eligible to apply for Guest Scientist positions ONLY.

The application period will close 1 February, 2010. This year we will be offering two rounds of applications - the second, for fall and winter positions, will begin in May. For more information, go to the GeoCorps Home page, <http://www.geosociety.org/geocorps>

List of GeoCorps Positions Available:

https://rock.geosociety.org/g_corps/2010/allJobDescriptions.asp

Contact information: M. Anny Jones, Geological Society of America Education & Outreach Program Officer, GeoCorps America. 303-357-1025

South Carolina Association of Environmental Professionals Announcements

We are in the middle of switching web site hosts, and will send out an announcement with the new SCAEP website address, as soon as it is up & running. Thank you for your patience.

The first SCAEP meeting of 2010 will be held at Edens & Avant's conference room (either in the new of-

fice building at Main & Gervais or their old office - we'll confirm the exact location in January). The speaker lined up for the January 21, 2010 meeting is Mr. Robert Bain with RPM Ecosystems, whose talk is entitled "RPM Science mimics Nature to grow High Performance, Native Hardwoods."

Please note that our new President for 2010 is Deborah Langley. Deborah will be sending out meeting announcements in 2010; however if anyone has any questions, please feel free to email Deborah, myself, Chris Lock (our 2010 Vice President), Katherine Kelly or any of our 2010 Board Members (Jude Peck, Tom Knight or Chuck Suddeth).

Thank you for your support and we look forward to seeing you at our 2010 meetings.

Contact information: Ronald F. Herrygers, P.G., SCAEP 2009 President. rherrygers@windstream.net



This trailer mounted thermal oxidizer unit for Multi-Phase Extraction is a recent addition to equipment rented out by Environmental Products & Services of Vermont.

Environmental Products & Services of Vermont, an AEG Carolinas section Silver Sponsor, recently announced that they have added a new trailer mounted thermal oxidizer unit for Multi-Phase Extraction. It works in conjunction their with newly outfitted high vapor extraction

(Continued on page 25)



Scott Pearce
Vice President
P.O. Box 484
High Point, NC 27261
P: 336.434.7750
F: 336.434.7752
C: 336.803.1783
spearce@adenviro.com
www.adenviro.com

A&D Environmental



Golder Associates
Ground Engineering & Environmental Services
4900 Koger Boulevard, Suite 140, Greensboro, NC 27407 - 336 852 4903

(Continued from page 24)

vacuum truck, is mobile and ready to travel, and is currently staged in the Atlanta office. Jake Pierce, the POC on this system, can be reached via phone at 770-888-1698 or email at jpierce@epssofvermont.com.

Environmental Products & Services of Vermont, Inc. is a multi-functional service organization that provides a wide range of products and services to its customers for the identification, monitoring, correction, and prevention of environmental problems. Pete Marotta is in the Raleigh office, and may be reached pmarotta@epssofvermont.com, or at 919 852 3595. The Raleigh office is at 6001 Chapel Hill Road, Suite 108, Raleigh NC 27607.

Enviro-Equipment is Growing!

Enviro-Equipment has recently hired manufacturing engineer David Taylor to manage the company's production of UL-standard control panels. He will oversee control panel production in the company's newly certified UL Shop at the Remediation Equipment Facility in Pineville, NC. David brings to Enviro-Equipment over a decade of manufacturing and technical experience, including 12 years with Rockwell Automation / Allen Bradley where he managed all aspects of panel assembly, from wiring and testing to layout and design issues.

Enviro-Equipment has also recently added several new pieces of equipment to the rental fleet:

- *In-Situ TROLL 9500 XP Professional*
- *Level TROLL 700s*
- *Dielectric MGD-2002 Helium/Hydrogen Detector*
- *Grundfos Rediflo4 Pump*
- *Waterra Hydrolift 2 Pump*

Enviro-Equipment, Inc. is a woman-owned small business that rents and sells equipment and supplies for air, water and soil monitoring. For more information, please visit the company's website at <http://www.enviroequipment.com>.

American Institute of Professional Geologists (AIPG)

The November/December issue of TPG is now available on line. The link for this publication is <http://www.aipg.org/Publications/TPGPublic.html>

2010 Scholarship Applications are due February

15, 2010. (Information in the November/December issue of TPG and online) http://www.aipg.org/Students/AIPGScholarship_poster_booth.pdf

(Ed:
Denise Chew,
President of
Enviro-
Equipment sent
this email to
GeoNews with
the photo)

Brian
and I had always
wanted to visit
the Hoover Dam
and we finally
got a chance in



Brian Chew admiring Hoover Dam.

October when we visited clients near Las Vegas, Nevada. Our favorite part of the dam tour was after an elevator ride took us 530 feet down through the rock wall of Black Canyon and we walked through a short tunnel to the Penstock Viewing Platform. It is in a small room on top of one of the huge 30-foot-diameter pipes that transport nearly 90,000 gallons of water each second from Lake Mead to the dam's hydroelectric generators. The strong vibrations from the water surprised us - the dam seemed to be alive. I was also not expecting the amount of water seepage along the walls in the tunnel. Fortunately, the guide told us that this was normal and was not a leak as I had feared!

GARCO, Inc.

Environmental, Industrial & Recycling Services

Al King
Sales Representative
Project Manager

alik@egarco.com
Mbl: 919-451-3960

P.O. Box 1907
Asheboro, NC 27204
2503 N. Fayetteville St.
Asheboro, NC 27203

Phone: 336-683-0911
Fax: 336-683-0811
www.egarco.com



Peter Marotta

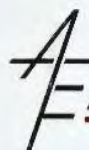
Branch Manager

(919) 852-3595
FAX (919) 852-1997

CAROLINA DIVISION
6001 Chapel Hill Road, Suite 108, Raleigh, NC 27607
Email: pmarotta@epssofvermont.com

- Emergency Response
- Remediation
- Waste Mgmt.
- Industrial Maintenance
- Products
- Training Svcs.
- Abatement

1-800-THE-TANK 24-HOUR EMERGENCY SERVICE



A.E. DRILLING SERVICES, INC.

Mark Lassiter, P.G.

President

Two United Way
Greenville, South Carolina 29607
Phone: (864) 288-1986
Fax: (864) 288-2272
E-mail: mlassiter@aedrilling.com

TECHNICAL SECTION**Pneumatic Slug Testing on Highly Transmissive Aquifers**

By In-Situ® Inc. Technical Support Team

Introduction

Slug testing has become a routinely accepted initial method for field determination of hydraulic conductivity. There are many advantages to the slug test technique:

- It can be performed quickly and thus is quite cost effective – several tests can often be performed in a single day.
- Water is not pumped from the well bore in significant quantities, so disposal problems are minimized.
- It can be performed where state or federal regulations prohibit pumping or injection.
- It can be performed where aquifers are very “tight” and pumping would cause the well to go dry.
- Hydraulic conductivity is determined for each well tested, and the spatial variability of this parameter across the site is very useful for numerical models and designing subsequent multi-well aquifer pumping tests.

However, the technique does have drawbacks, such as:

- The computed value of hydraulic conductivity is accurate only to within an order of magnitude.

- The storage coefficient cannot be satisfactorily determined.
- No closed-form analytic solution yet exists to solve for hydraulic conductivity in unconfined aquifers.
- Tests can be strongly affected by skin effects, well bore storage, and filter pack problems.
- The aquifer volume affected during the test is small, so hydraulic conductivity values can be applied only locally.
- In highly transmissive aquifers, the recovery rate can be so rapid that manual slugging, via solid slugs, bailers or injected water, can cause significant “noise” in the very-early-time data. This can lead to erroneous interpretations of the data set.

For the latter problem, in highly transmissive aquifers, a very good alternative is the pneumatic slug test (Levy & Pannell, 1991).

Comparison of Methods

In a conventional slug test, also known as “slug-in” or “falling-head” test, the water level is artificially raised in the well bore above static water level (SWL). This can be accomplished by injecting a volume, for example by pouring water or by lowering a solid cylinder, into the well. Likewise, in a bail test, also known as “slug-out” or “rising-head” test, the water level is artificially lowered in the wellbore below the SWL. This can be accomplished by withdrawing a volume from the well. In either “slug-in” or “slug-out,” the critical data are taken

(Continued on page 27)

In-Situ Inc.

Reliable, accurate water level monitoring

Level TROLL®
Instrument Family

- Reliable data logging of water level, temperature, and pressure
- Complete family of level instruments for every application and budget
- Real-time monitoring and alarming via telemetry
- Comprehensive project support 24/7

Application/technical notes and product specifications available at www.in-situ.com

Instruments starting at **\$395.00!**

From the Water Level Experts: In-Situ® Inc.

CALL 1-800-446-7488 • 1-970-498-1500 • WWW.IN-SITU.COM

(Continued from page 26)

as the water level rapidly recovers back to the original SWL. It is important to note that the equations require the initial “slugging” event to be instantaneous, a condition that may be difficult to achieve with mechanical slugging techniques in a highly transmissive aquifer.

In contrast, the pneumatic slug testing technique utilizes air as the “slugging” agent. In this method, the well is sealed at the surface, and then air is injected into the sealed well. The increased pressure head of air on the water column forces the water downward by an amount equivalent to the air pressure applied. As the water level is forced downward it escapes from the well via the screen and filter pack and enters the aquifer. After some time has elapsed for re-equilibration of the water level in the immediate vicinity of the well bore, the pneumatic slug test can be performed.

Pre-Test Considerations

Several factors must be considered before performing a pneumatic slug test. First, is it really necessary to perform the slug test via a pneumatic method? The answer may be “no” if the water level equilibration time is on the order of tens of minutes; conventional techniques might work well in this case and the additional equipment necessary to perform the pneumatic method might be unwarranted. On the other hand, if the water level is approaching SWL after a few tens of seconds, then a pneumatic method may be very useful.

Second, consider what happens when air is injected into the well. The water level is forced downward by an amount equivalent to the pressure applied. For ex-

ample, if air is injected into a well so that the stabilized air pressure is 2 lb/in² (psi), the water level is forced downward by approximately 4.6 feet (2 psi * 2.31 ft H₂O/psi). Of primary concern is the depth below SWL to the top of the screen. If the new water level, which is now 4.6 feet lower in our example, should drop below the top of the screen, then air will escape through the screen directly into the aquifer and the test is nullified. Techniques exist to use the pneumatic method in wells where the air-water interface would intercept the screen, but these techniques involve other equipment and procedures and are beyond the scope of this article.

Third, the data gathering program is crucial for success. Utilizing the true logarithmic sample schedule on the Level TROLL® 700 instrument is the ideal way to capture water level measurements during this event. It is advisable to start logging data a few seconds before opening the valve in order to capture the original SWL. The initial portion of data shows the static, background condition. This is followed by a rapid, apparent drop in water level due to pressure head drop when the ball valve is opened and is not due to a drop in water level. The final data segment will show the rapid water level rise which represents the recovery phase.

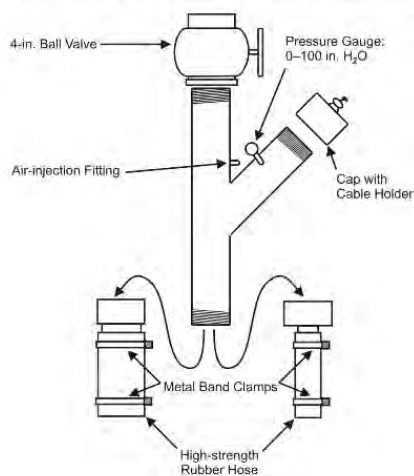
Well Head Assembly

In order to conduct a pneumatic slug test, a special apparatus must be built or purchased. Refer to the diagram to the left, of a standard pneumatic slug test well head assembly unit. Crucial elements of its design are:

- A quick-release ball valve at the top of the unit that is the same diameter as the well or larger.
- The ball valve orientation is such that, upon opening the valve, air flows straight through the entire unit without turning any corners.
- The probe insertion port that does not interfere with the ball valve and allows effective air sealing around the transducer cable.
- A manual air gauge that monitors the pressure injected into the well head and is preferably graduated in inches or centimeters of water for ease of use.
- The air injection port can accommodate standard air tools (i.e., those which accommodate Schraeder valves).

(Continued on page 28)

Pneumatic Slug-Testing Wellhead Assembly



**B&C
CORE**

Buck Demarest, Drill Manager
Terri Rogers, Business Manager
 919-872-9551 Office 919-872-9552 Fax
 BoreAndCore@BellSouth.net
 Geotechnical & environmental boring and well abandonment
 2817 Brewton Place, Raleigh, NC 27604

<http://boreandcoreinc.com>

SGS

Environmental Services

SGS Environmental Services Inc.
 5500 Business Dr.
 Wilmington, NC 28405
www.us.sgs.com

Kendall Sutler

General Manager

t (910) 350-1903
 f (910) 350-1557
 m (513) 314-9584
 e kendall.sutler@sgs.com

(Continued from page 27)

- The base can accommodate either two-inch or four-inch wells and has an easy-to-install airtight seal.

Conducting the Test

First, measure the depth to SWL using a water level indicator and determine the distance from SWL to the top of the screen. The amount of downward pressure imparted by air must not exceed this distance.

Second, install the pneumatic slug testing well-head assembly.

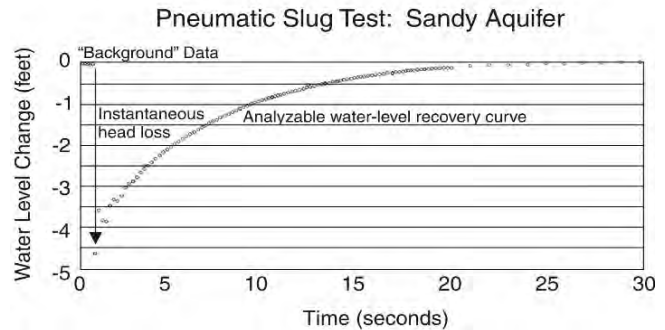
Third, program the Level TROLL 700 instrument. Use Win-Situ 5 or Win-Situ Mobile for programming a Level TROLL 700 instrument. For slug tests, it is important to measure the change from the initial condition, so it is advisable to set the Level Reference to "Zero" at the start of the test. Apply the Level Reference settings before pressurizing the well.

Fourth, pressurize the well to a pressure equivalent that is four to eight feet of water, but do not exceed the previously determined maximum. Wait for the pressure gauge on the well head to stabilize; when it does, the aquifer is approaching equilibration and the test may commence. Start the test on the instrument, wait a few seconds, and then open the ball valve at the well head to allow the air to escape from the well. Monitor the water level as it rises. The test is complete when the water level has risen to approximately the original SWL. The final

segment of the curve will be used to analyze the data and calculate the hydraulic conductivity of the aquifer in that location (see figure below).

Conclusion

For highly transmissive aquifers, a pneumatic



slug test method may be the best way to gather data for the purpose of determining hydraulic conductivity. Incorporating a Level TROLL 700 instrument into a pneumatic slug test unit is an easy and reliable way to gather water level data. The true logarithmic sample schedule is ideal for this type of test because measurements are logged as fast as possible and gradually get further apart on a logarithmically decaying schedule until they become linear. Samples are very closely spaced at the start of the test, when water level is changing rapidly: 4 measurements per second for the Level TROLL 700 instrument. Upon test definition, the user defines the linear rate for the end of the log; this ensures that measurements are not spaced too far apart.

References

Levy, B.S. and Pannell, L., 1991. "Evaluation of a Pressure System for Estimating In-Situ Hydraulic Conductivity." Ground Water Management, No. 5 (Proceedings 5th National Outdoor Action Conference, Las Vegas, NV), pp. 31-45.

About the Authors

In-Situ Inc.'s technical support team provides 24/7 project support for all of your groundwater monitoring and testing needs. Call 800-446-7488 or visit www.in-situ.com.



MMPE rental available

Full turnkey service, 300 ACFM
Covington Diesel 45KV generator

Excellent pricing!!!

Hill Equipment - 800-842-2831
info@hillequipmentinc.com



MARK J. DENIL, PG

EM
GPR
RESISTIVITY
SEISMIC
MAGNETOMETRY

700 N. EUGENE STREET
GREENSBORO, NC 27401
OFFICE: 336.286.9718
CELL: 336.339.8390
DENILM@BELLSOUTH.NET

OPPORTUNITIES

Internship Opportunities Available at North Carolina Geological Survey

Applications are now being accepted for the Summer 2010 North Carolina State Government Internship Program. You can download the internship booklet and an application form from: <http://www.doa.state.nc.us/yaio/internprogramdetails.htm>. The booklet contains all of the summer program details, including eligibility, application instructions and a listing of available internship projects. Applications must be postmarked by January 20, 2010, for consideration. The N.C. Geological Survey has 2 internship opportunities, Internship #57 in Raleigh - Geologic Education and Outreach Assistant, and Internship #60 in Swannanoa - Landslide Geology Field Assistant.

The Raleigh intern (#57) will actively engage in Earth Science education and outreach, ranging from informal to formal and from K-12 to adult. Projects will be tailored to the intern's interests and capabilities, with the main objective to create fun and interactive geology programs using a range of methods and technologies. This intern will be expected to work independently, but will receive guidance and assistance. Outdoor experiences may include field trips, outdoor classes and light hikes to areas of geologic interest. Indoor responsibilities may

include library and internet research and development of audio/visual aspects of the programs. The intern will gain valuable experience in managing and creating interactive science based programs, which will become a permanent part of the Education and Outreach programming and expand the web presence.

The Swannanoa intern (#60) will assist in creating Landslide Hazard Maps for local governments, emergency management, and general public safety in Western North Carolina as part of the Landslide Hazard Mapping Program. The major task to be performed includes assisting a field partner in collecting geologic and landslide field data at landslides in Western North Carolina. The intern will use Geographic Information Systems (GIS), field computer, and aerial photography in both the office and in the field. Work will also involve collecting geologic, landslide, and deposit field data, collecting soil and rock samples, and collecting location data using a GPS unit and field maps. Intern will gain experience in an applied geology project important to public safety. For more information, contact Randy Bechtel, Education/Public Outreach Geologist North Carolina Geological Survey, 1612 Mail Service Center, Raleigh, NC 27699-1612. Randy's email address has changed to Randy.Becht@ncdenr.gov. The NCGS website is <http://www.geology.enr.state.nc.us/>; phone 919-733-2423



Drew Baird, P.G.
Southeast District Manager

115-B Broadus Avenue
Greenville, SC 29601

Tel: 864.240.9181 • Cell: 864.884.4346 • Fax: 864.240.9182
dbaird@regenesi.com • www.regenesi.com

geotech

Environmental Equipment, Inc.

The one source for all of your environmental equipment needs

Since 1978, Geotech has been engineering, manufacturing and selecting products that will meet the requirements of groundwater monitoring, analysis, sampling and remediation consultants and engineers. 4,400 clients include governmental, industrial and consulting engineering firms, both nationally and internationally.

Geotech brands include familiar names such as Keck, ORS and Marschall. In addition, Geotech sells and services select products from Grundfos, RAE, YSI, and many more. Geotech's manufacturing ability creates many custom versions and options of its products.

Value-added services include expert tech support, free training, easy-to-understand rental policies, calibration and repair by factory-trained technicians.

Geotech quickly ships equipment, parts and supplies from its large in-stock inventory. An option for Geotech customers is to rent equipment and wait to buy later. Geotech maintains one of the largest and most up-to-date rental inventories in the industry.

You can contact Geotech for products and services at these convenient office locations:

N. Carolina Service Center	1-800-293-5325
Florida Service Center	1-800-304-5325
Texas Service Center	1-800-276-5325
Denver Home Office	1-800-833-7958
Vermont Service Center	1-800-558-5325
Michigan Service Center	1-800-275-5325

www.geotechenv.com

LANDPROBE
ENVIRONMENTAL & GEOTECHNICAL DRILLING SERVICES

Licensed Throughout the Southeast

Truck-Mounted & Track-Mounted Geoprobes
CPT
DPT
Well Installation
Injection

Truck-Mounted & All-Terrain Mounted Drill Rigs
Hollow-Stem Auger Drilling
Mud Rotary Drilling
Rock Coring
Air Rotary Rig
Geotechnical Drilling
Undisturbed Sample Collection
Pressure Grouting
Packet Testing

6004 Fonder Court • Greenville, SC 29615 • 1528 Highway 136 SW • Marietta, GA 30066
105 Fairview Road Suite A • Asheville, NC 28903 • (888)345-0170 • Fax 824/285-4430
For more information visit us at www.landprobe.com

STATEWIDE ORTHOIMAGERY 2010 PROJECT

North Carolina is taking a giant step toward the GICC's vision of a "robust statewide aerial photography program." The North Carolina 911 Board awarded a grant of \$12.3 million to the City of Durham's Emergency Communications Center on September 25, 2009 for acquisition of statewide orthoimagery.

The City of Durham recognized that the value of up-to-date, consistent orthoimagery would apply equally to its neighboring counties. The current situation in North Carolina is a patchwork of imagery (years captured and resolutions) and a slow pace of new imagery acquisition.

The Durham Public Safety Answering Point (PSAP) concluded that a statewide project would maximize benefits in a timely way. Durham consulted the Statewide Mapping Advisory Committee's Working Group for Orthophotography Planning, and submitted a winning proposal that will put the vision into action. Detailed project planning is underway with products expected by early 2011. Project elements include:

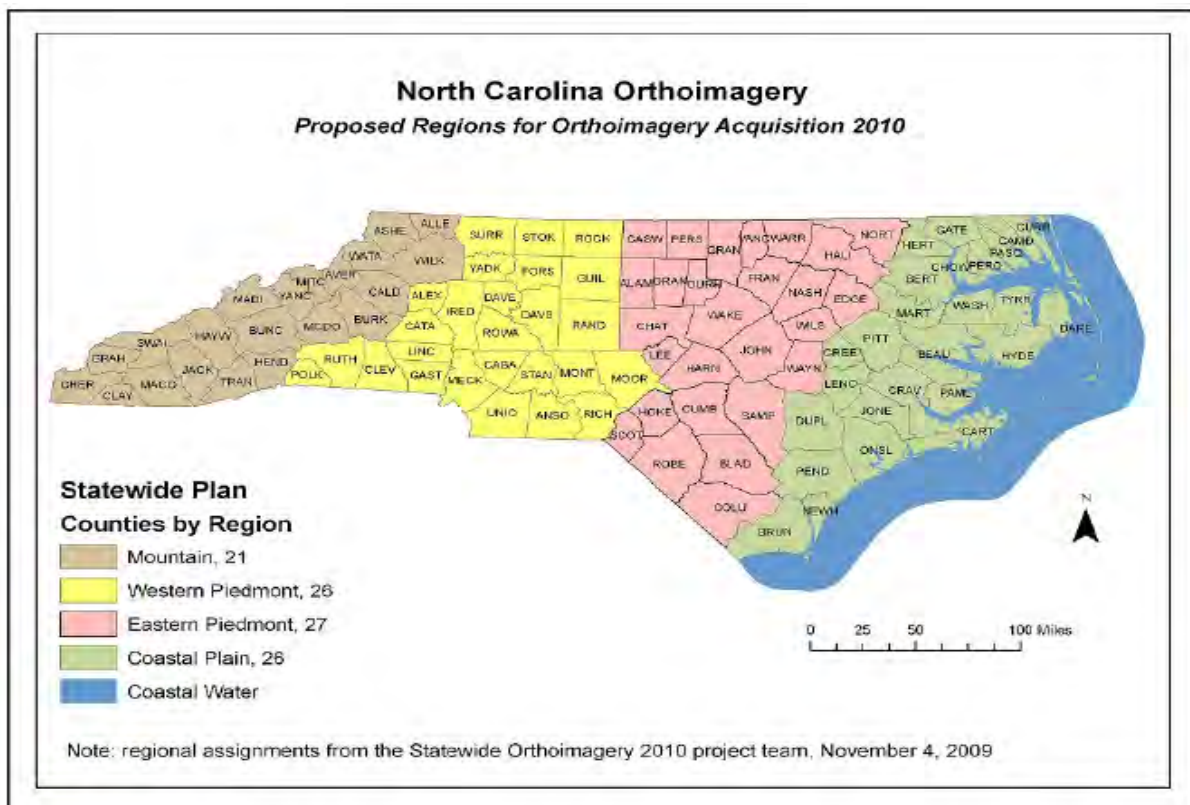
- *Flights for acquisition of digital aerial photography across state during the winter flying season (January to April on clear days before leaves return to deciduous trees)*
- *Enhancements to geodetic equipment and a new camera calibration range*

- *Processing of color orthoimagery supported by LIDAR elevation data*
- *Quality control for positional accuracy and visual consistency*
- *Documentation, packaging and distribution to counties for 911 purposes*
- *Information technology enhancements to the NC OneMap infrastructure*
- *Public access through NC OneMap*
- *Outreach includes a project website: www.nconemap.gov "NC Orthos" tab*

This is a collaborative project managed by the NC Center for Geographic Information and Analysis (CGIA). The NC Floodplain Mapping Program is tasking its Qualifications-Based Selection contractors to do acquisition, processing, and visual quality control. NC Geodetic Survey is upgrading reference systems and selecting contractors for positional quality control.

The Working Group for Orthophotography Planning is providing technical advice to the partners. In addition, the GICC adopted the Land Records Management Program's new state specifications for orthophotography—a technical foundation for this project—in August. They were officially approved by the Secretary of State on October 1.

Flights for imagery acquisition will be divided among contractors over four regions (see map below). For more information, please contact Tim Johnson, tim.johnson@its.nc.gov or 919-754-6588.



Congressional Visits Need Citizen Geoscientists



Please come to Washington DC in April and/or September, 2010 for organized group visits with policymakers in the U.S. Congress.

Decision makers need to hear from geoscientists. Become a citizen geoscientist and join many of your colleagues for a workshop at AGU headquarters followed by a day conducting visits with Members of Congress or congressional staff on Capitol Hill.



The visits will focus on the importance of geoscience research and development and geoscience education. Geoscientists will speak for these shared concerns with a unified message and can enhance the message by using examples from their professional work and experiences.



**Science-Engineering-Technology
Congressional Visits Day**
April 28-29, 2010



**Geosciences Congressional Visits
Day**
September 21-22, 2010



AGU and the American Geological Institute (AGI) support Congressional Visits Days in partnership with many other science and engineering societies.

For more information or to sign up, please contact:

Elizabeth Landau, AGU Public Affairs, elandau@agu.org

Linda Rowan, AGI Government Affairs, rowan@agiweb.org



CALENDAR OF EVENTS - 2010

Geological Events in the Carolinas

Courtesy of AEG Carolinas Section – www.aegcarolinas.org. Last updated December 18, 2009

Send updates/corrections to Rick Kolb, MACTEC, RAKolb@MACTEC.com

Meeting Date, Time, and Location are Subject to Change – Please Verify Prior to the Meeting

Date: February 4, 2010

Event: Presentation by Duane Kreuger, AEG President
Location: 2:00 PM; McEniry Hall; University of North Carolina at Charlotte
Contact: Rick Kolb, rakolb@mactec.com

Date: February 4, 2010

Event: AEG Carolinas Section Winter Meeting – Concord, NC
Location: 6:00 PM; Dave & Buster's; Concord Mills Mall; Concord, North Carolina
Contact: Brad Worley, bdworley@ncdot.gov
Estimated PDH: 1

Date: February 18, 2010

Event: AEG Visiting Professionals Presentation
Location: 4:00 PM; Graham Building 309; East Carolina University; Greenville, North Carolina
Contact: Rick Kolb, rakolb@mactec.com

Date: February 23-24, 2010

Event: Second Biennial Southeastern *In Situ* Soil and Groundwater Remediation Conference
Location: Renaissance Raleigh Hotel; Raleigh, North Carolina
Contact: John Haselow, jhaselow@redox-tech.com, (919) 678-0140
Estimated PDH: 16

Date: March 2010 (date to be determined)

Event: Spring meeting and elections of the Ground Water Professionals of North Carolina
Location: Clarion Greensboro Airport Hotel; Greensboro, North Carolina
Contact: Nicole Manning, nicole@choice-enviro.com
Estimated PDH: Unknown

Date: April 8, 2010

Event: AEG Carolinas Section Spring Meeting
Location: 6:00 PM; Carolina Ale House at Brier Creek; Raleigh, North Carolina (the WHOLE patio this time!)
Contact: Rick Kolb, rakolb@mactec.com
Estimated PDH: 1

Date: March 13-16, 2010

Event: Geological Society of America, Joint Annual Meeting of the Northeastern and South-eastern Sections
Location: Sheraton Baltimore City Center Hotel; Baltimore, Maryland
Contact: <http://www.geosociety.org/meetings/>
Estimated PDH: Unknown

Date: September 20-26, 2010

Event: AEG Annual Meeting
Location: Francis Marion Hotel; Charleston, South Carolina
Contact: Briget Doyle; doyleb@cofc.edu
(See flyer in this newsletter, page 18-19)
Estimated PDH: Unknown

Date: November 4-7, 2012

Event: Geological Society of America Annual Meeting
Location: Charlotte, North Carolina

GOT GEOLOGIC EVENTS?
Get them on our calendar.
Email our AEG Carolinas
Schedule Person Rick Kolb,
RAKolb@MACTEC.com

MEMBER BENEFITS

Networking, with colleagues at meetings, through technical publications and on the AEG web page, is a valuable professional development benefit because it allows a member to:

- ♦ Broaden and update technical, practical, and business knowledge.
- ♦ Keep career paths open by assuring that the value, utility and scope of engineering geology is recognized in the scientific, technical, legal, and regulatory arenas.
- ♦ Explore numerous opportunities for career enhancement through contacts at technical meetings and in continuing education programs.
- ♦ Influence the profession of environmental and engineering geology as it serves society and as it is regulated.
- ♦ Establish the standards of the profession.

AEG members receive our quarterly professional journal, *Environmental and Engineering Geoscience* and six issues of the *AEG NEWS* as a regular dues benefit.

Members also enjoy a 20% "member discount" on all special publications, registration fees at meetings, short courses, and field trips.

PROFESSIONAL DEVELOPMENT

*AEG -- Serving Professionals in
Environmental, Ground-Water and
Engineering Geology since 1957*

- ♦ AEG sponsors workshops and short courses for which official Continuing Education Units are offered.
- ♦ AEG encourages its members to participate in activities of mutual interest with other societies and organizations.
- ♦ The annual Richard H. Jahns Distinguished Lecturer in Engineering Geology is co-sponsored by AEG and the GSA Engineering Geology Division.
- ♦ AEG members make presentations and lead field trips for students at all levels.
- ♦ AEG's Technical and Professional Practice Committees keep the Association in a position of influence through their wide-ranging activities.
- ♦ AEG's 25 Sections and 20 Student Chapters provide educational and networking opportunities for members through regular meetings, field trips and local newsletters.
- ♦ Students compete for scholarships and awards, and interact with practicing professionals.
- ♦ Short courses, field trips, and technical sessions provide opportunities for AEG members to enhance their professional practice.
- ♦ International members are found in more than 20 countries and Designated Correspondents enhance technology transfer among more than a dozen countries.

MEMBERSHIP APPLICATION

ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS



The Association of Environmental & Engineering Geologists (AEG) is an international, non-profit scientific and technical society, whose 3,000 members include geologists specializing in engineering geology, environmental geology, and ground-water geology as well as other professionals in affiliated fields such as civil and mining engineering, land-use planning, public policy and education.

Through its technical and professional activities, AEG strives to promote the value and importance of geologic practice in:

- ♦ detecting, containing, and remediating contaminated soil and ground water;
- ♦ recognizing and mitigating hazardous geologic processes to promote public safety and welfare; and
- ♦ siting, planning, designing, constructing, and maintaining engineered works.

Check Us Out
www.aegweb.org

MEMBERSHIP REQUIREMENTS

MEMBER: Applicants for Member Class shall hold a degree in geology, engineering geology or geological engineering, or a degree in a related professional field with 30 semester-hours of credit in the geosciences. In addition an applicant shall be practicing in the field of Engineering Geology, Environmental Geology or Hydrogeology. Annual Dues for new (first-time) Members = \$75.00 per year for the first year of membership. Otherwise Annual Dues = \$115.00. Applicants who qualify for Member Class, but are engaged in full-time teaching at the Primary or Secondary (K-12) level are eligible for Teacher Status (Annual Dues = \$35.00).

AFFILIATE: Applicants for Affiliate Member Class shall be scientists or engineers who work with engineering geologists; teachers engaged in middle-school and high school Earth Science education; or persons interested in engineering geology. Annual Dues = \$75.00 (Teacher Dues = \$35.00)

STUDENT: Applicants for Student Member Class shall be full-time students enrolled in an academic program in the geosciences or in a related field in engineering. Annual Dues = \$25.00

INTERNATIONAL: Applicants shall hold the same requirements as for Member Class, but may select from the following dues schedule: \$35, which includes the *Environmental and Engineering Geology Journal*; \$45 with the *Journal*, the *Annual Directory* and the *Annual Meeting Abstracts*; or \$55 with the *Journal*, *Annual Directory*, *Annual Meeting Abstracts* and the *AEG News*.

AEG memberships are based on calendar year. Applications received after October 1 will be entered for following calendar year.

APPLICATION FORM

Please complete this form and mail it with your Annual Dues payment to the Association's Headquarters office for processing. New member applicants do not pay Section dues for their initial year of membership.

Name: _____
(Please print your name as you would like it shown on your membership certificate.)

PREFERRED ADDRESS: _____

WORK PHONE: _____ FAX: _____

PREFERRED E-MAIL: _____

Second Address: _____

Home Phone: _____

DESIRED CLASS OF MEMBERSHIP: _____ ANNUAL DUES AMOUNT: _____

CERTIFICATION: _____
(Signature)

My signature attests that, to the best of my knowledge, I meet the academic and practice requirements for the membership class I have requested and that all entries on this application are true and correct. I also authorize AEG to charge my credit card for the dues payment, if I selected the credit card payment option.

☐ Enclosed is my check for the amount of Annual Dues of \$ _____

Credit Card Payment Option

☐ Discover ☐ MasterCard ☐ Visa Amount of Dues to be charged to my card = \$ _____

Card Number: _____ Expiration Date: _____

SUBMISSION: Send this form with your check or credit card authorization to:
Association of Environmental & Engineering Geologists, PO Box 460518, Denver, CO 80246
Phone: 303-757-2926 FAX: 303-757-2969 AEG Web: www.aegweb.org



AEG CAROLINAS SECTION – SPONSOR INFORMATION

The Carolinas Section of AEG supports many of its activities with financial assistance provided by our sponsors. Our activities include quarterly meetings, periodic field trips and seminars, a quarterly newsletter, and email announcements about our meetings and geoscience related activities. In addition, we donate educational resources to science teachers.

We offer several levels of sponsorship, but they all have one goal: to keep the sponsor's name in front of our members and to bring you business. We have a real commitment to connecting our sponsors to potential buyers and will do all we can to help you build your business. Most of our members are practicing professionals with responsibility for selecting subcontractors, so our group is a great place to find new customers and to catch up with existing customers in an informal setting.

Our sponsors provide financial support that allows us to have reasonably priced dinner meetings, host seminars, provide discounted dinner meeting costs for students, underwrite the cost of newsletters and our web site, support science education tools to our teachers and in our schools, and provide funding for two \$500 scholarships each year. All costs listed below are per year and end in December. New sponsorships received after October will continue to December of the following year.

Silver Sponsor (\$250):

GeoNews Newsletter: Business card size ad (2" high x 3-1/2" wide), four times per year.

Meetings: Listing on a Sponsor Poster, located at sign-in table.
Verbal acknowledgement by name in Chairman's introductory comments.

Meeting Exhibits: Space for tabletop display at one meeting. Cost of meeting waived for one person on the exhibit date.

Email Announcements: Listing of your company name on each AEG Carolinas Section email announcement (our email list is currently over 1,000 people).

Web Page: Acknowledgement on the AEG Carolinas Section

Web Page, www.aegcarolinas.org, with a link to your site.

Gold Sponsor (\$375):

GeoNews Newsletter: Quarter-Page ad (4-1/2" high x 3-1/2" wide), four times per year.

Meetings: Listing on a Sponsor Poster, located at sign-in table.
Verbal acknowledgement by name in Chairman's introductory comments.

Meeting Exhibits: Space for tabletop display at two meetings. Cost of meeting waived for one person on the exhibit date.

Email Announcements: Listing of your company name on each AEG Carolinas Section email announcement (our email list is currently over 1,000 people).

Web Page: Acknowledgement on the AEG Carolinas Section

Web Page, www.aegcarolinas.org, with a link to your site.

Platinum Sponsor (\$500):

GeoNews Newsletter: Half-page ad (4-1/2" high x 7" wide), four times per year.

Meetings: Listing on a Sponsor Poster, located at sign-in table.
Verbal acknowledgement by name in Chairman's introductory comments.

Meeting Exhibit: Space for tabletop display at three meetings. Cost of meeting waived for one person on the exhibit date.

Email Announcements: Listing of your company name on each AEG - Carolinas Section email announcement (our email list is currently over 1,000 people).

Web Page: Acknowledgement on the AEG Carolinas Section

Web Page, www.aegcarolinas.org, with a link to your site.

GeoNews Newsletter Sponsorship Only

Businesses or individuals can also advertise in GeoNews without being a full sponsor. The annual rates for advertising in GeoNews are as follows:

Business Card	\$ 40.00
Quarter Page	\$ 60.00
Half Page	\$ 100.00
Full Page	\$ 200.00

Please complete the form below and mail to Jane Gill-Shaler, AEG Carolinas newsletter editor. Please call or email if you have any questions (contact information below).

AEG Carolinas Section Sponsorship Form

Please begin our sponsorship of the Carolinas Section of the Association of Engineering Geologists. Our sponsorship level is:

- _____ Platinum Section Sponsorship, \$500/year
 _____ Gold Section Sponsorship, \$375/year
 _____ Silver Section Sponsorship, \$250/year
 _____ GeoNews Newsletter Sponsor Only (see above)

Name: _____

Address: _____

City, State, Zip: _____

Phone: _____ Fax: _____

Contact Person: _____

Cell: _____

Email: _____

Website URL: _____

Date of Payment: _____

Something about your company: _____

Please enclose a business card or email ad in jpg, pdf, or doc.
 To Jane Gill-Shaler at janehgill@aol.com.

MAKE CHECK OUT TO AEG CAROLINAS

Mail mail form and payment to:

Jane Gill-Shaler, AEG Carolinas Newsletter Editor
 1636 West Lexington Ave., High Point, NC 27262
JaneHGill@aol.com

Thank You, AEG Carolinas Sponsors!!

PLATINUM SPONSORS

Enviro-Equipment, Inc., Denise Chew, 888-274-8929, www.enviro-equipment.com. We are a Woman-Owned Small Business, staffed by experienced professionals, committed to providing quality environmental equipment and products for rent or sale at reasonable rates. EEI is a stocking distributor of numerous environmental products for detection of air, water, and soil contamination.

Geobruigg North America, Frank Amend, 252-937-2552, www.geobruigg.com. GeoBrugg North America is a premier supplier of engineered rockfall protection and slope stabilization systems. Our wirework-based, unobtrusive, and ecology-friendly systems blend well with the natural surroundings. Well-proven anti-corrosion processes permit achieving a useful life up to 100 years and our installed systems require virtually no maintenance.

In-Situ, Inc., Jason Evans, 800-446-7488 ext. 587, www.in-situ.com. In-Situ® Inc. designs, manufactures, distributes, and rents environmental equipment for monitoring the quantity and quality of groundwater and surface water. In-Situ Inc.'s headquarters are located at the foot of the Rocky Mountains in Fort Collins, Colorado, USA. In-Situ offers world-class technical support 24 hours a day, 7 days a week through its global network of regional offices and distributors.

Pine Environmental, Inc., Paul Federline, 866-646-7463, pfederline@pine-environmental.com. Pine is the leading provider of rental equipment in the nation with the latest instruments available. Pine Environmental Services, Inc. takes pride in their unprecedented customer support and competitive pricing. Extended hours of operation and after-hour emergency support are on hand.

TRS Environmental, Susan Boutwell, 972-456-4000, trs@trs-environmental.com, <http://www.trs-environmental.com>. We provide a wide variety of environmental monitoring, sampling, and field and safety supplies for rent, lease, or sale.

Vulcan Materials Company, Jim Stroud, 336-767-4600, Stroudj@VMCMAIL.com, www.vulcanmaterials.com. Vulcan is the nation's leading producer of crushed stone.

Zebra Environmental, Inc., Mike Early, 919-424-6122, MikeE@zebraenv.com, www.teamzebra.com. ZEBRA is a specialized environmental contracting company dedicated to providing high quality subsurface sampling, installation, injection and data collection services to engineering and consulting firms. Since 1992, ZEBRA has earned a solid reputation as the most experienced, best equipped and most reliable direct push/probing service provider on the East Coast.

GOLD SPONSORS

American Environmental Drilling, Inc., Guy Veni, 910-944-3140, 800-779-8854, Guy@aedi.biz, <http://aedi.biz>. American Environmental Drilling, Inc. provides competitive full drilling services to North Carolina, South Carolina, and Virginia. Safety is a major factor in what we do and our drilling teams are fully trained and meet OSHA standards. We pride ourselves in being able to provide safe, reliable, fast, and efficient services. Our strong relationships with our clients allow us to understand their needs and be proactive in meeting their requirements.

EOS Remediation, Gary Birk, 919-873-2204, gbirk@eosremediation.com, www.eosremediation.com. EOS Remediation is scientifically-tested, field-proven for Enhanced Anaerobic Bioremediation, Enhanced Aerobic Bioremediation and Bioaugmentation. EOS Remediation's products are specifically developed and designed for cost-effective, in situ treatment of groundwater.

LandProbe, LLC, Joy Stugg, 888-349-0176, joy@landprobe.com, <http://www.landprobe.com>. We are a full service environmental and geotechnical drilling contractor with locations in Greenville, SC, Monroe, GA, and Asheville, NC, – serving clients throughout the southeastern United States.

Nicholson Construction, Brian M. O'Gara, 412 221 4500, BOGara@NicholsonConstruction.com, <http://www.nicholsonconstruction.com>. Nicholson Construction Company has been setting the industry standard for performance and technical innovation in geotechnical construction. As the North American business unit of the Soletanche Bachy Group, Nicholson is part of a global network of unparalleled geotechnical resources and expertise.

Schnabel Engineering, Robert Cannon, 336 274 9456, rcannon@schnabel-eng.com, Gary Rogers, grogers@schnabel-eng.com, <http://www.schnabel-eng.com>. Schnabel provides geophysical surveys, dam design and rehabilitation, geotechnical engineering, and environmental services.

SILVER SPONSORS

A & D Environmental Services, Scott Pearce, 336-434-7750, spearce@adenviro.com, <http://adenviro.com/index.html>. A&D Environmental Services, Inc. provides turn-key solutions to our client's environmental and industrial concerns.

AE Drilling Services, Inc., Mark Lassiter, 864 288 1986, mlassiter@aedrilling.com, www.aedrilling.com. AE Drilling Services LLC performs geotechnical, environmental, mineral exploration, and water supply drilling services throughout the southeastern U.S. Services include ATV auger, coring, air & mud rotary

(Continued on page 36)

Thank You, AEG Carolinas Sponsors!!

(Continued from page 35)

drilling, probing & reagent injection, inclined drilling, deep & large diameter mud & air rotary drilling, & well rehabilitation.

Bore & Core, Inc. Buck Demarest & Terri Rogers, 919-872-9551, boreandcore@bellsouth.net. Bore & Core was founded in 1981 in Raleigh, NC. We are dedicated to providing high quality geotechnical and environmental drilling services to our clients. Our highly trained & experienced drilling team makes us the company of choice for some of the most highly technical & sensitive jobs, not only in the Triangle of NC, but the southeastern United States.

Choice Environmental Services. Nicole Manning, 919-369-1001, nicole@choice-enviro.com, www.choice-enviro.com. Rentals and Supply Sales of water quality, water sampling, air monitoring, and soil sampling equipment and supplies.

ENCO Laboratories, Inc. Jim Hays, 919-467-3090, jhays@encolabs.com, <http://www.encolabs.com>. A network of environmental laboratories that has been providing analytical testing services since 1988.

Environmental Products and Services of Vermont, Inc. Peter Marotta, 919-852-3595, pmarotta@epsosvermont.com, www.epsosvermont.com. EP&S is a comprehensive environmental and industrial contractor providing a wide range of services from Emergency Spill Response, Vacuum Truck Services, Soft Utility Excavations, Tank Removal and Cleaning, Industrial Cleaning and Maintenance Services, Site Remediation, Hazardous and Non-Hazardous Waste Disposal and more.

Garco, Inc. Al King, 336-683-0911, alk@egarco.com, <http://www.egarco.com>. GARCO, Inc. provides environmental, industrial, waste transportation, disposal and recycling services to industrial and consulting clientele throughout the Southeast.

Geotech Environmental Equipment, Inc. David Hathaway, 919-460-0604, 919-460-0984, davidh@geotechenv.com, <http://www.geotechenv.com>. Geotech manufactures and distributes sampling, filtration, analytical and remediation products for the ground and surface water industry.

Golder Associates. Rachel Kirkman, 336-852-4903, rachel_kirkman@golder.com, <http://www.golder.com>. Golder provides ground engineering and environmental services worldwide to various industries, natural resource providers and government.

Joyce Engineering, Inc, Greensboro Office. Hannu Kemppinen, 336-323-0092, hkemp-pin@joyceengineering.com, www.joyceengineering.com. Joyce Engineering is a full-service solid waste management consulting firm

dedicated solely to the solid waste industry. throughout the Mid-Atlantic and Southeastern United States.

KB Labs. Todd Romero, 352-367-0073, toddr@kbmobilelabs.com, www.kbmobilelabs.com. We provide SCDHEC, NCDENR, and NELAP certified mobile laboratory services and membrane interface probe (MIP) direct-sensing technology. Our mobile labs can analyze water, soil, and soil gas samples onsite for volatiles, pesticides, or PCBs.

MACTEC Engineering and Consulting. Rick Kolb, 919-831-8054, rakolb@MACTEC.com; www.MACTEC.com. MACTEC is headquartered in Atlanta and is a leading consulting firm that provides engineering, environmental, and construction services. MACTEC has over 3,000 employees in 80 U.S. locations and has offices in Asheville, Charlotte, Greensboro, Research Triangle Park, Raleigh and Wilmington, North Carolina and in Greenville and Columbia, South Carolina.

Parratt-Wolff, Inc. Robert "Butch" Stevens, 800-627-7920, bstevens@pwinc.com, www.pwinc.com. Groundwater Monitoring and Subsurface Exploration Services.

Regenesis. Drew Baird, 864-240-9181 or 864-884-4346, dbaird@regenesisc.com, www.regenesisc.com. Regenesis develops, manufactures, and markets innovative technologies to clean up the environment in a way that conserves our customers' time and money. We are located in Greenville, SC.

SAEDACCO. Pete Byer, 864-240-9181, pbyer@saedacco.com, www.saedacco.com. SAE-DACCO is a southeast regional environmental services company headquartered in Fort Mill, SC. SAE-DACCO is structured to provide turnkey environmental services including geoprobe, drilling, UST removals, remediation system installations and remediation system fabrication.

SGS Environmental, Wilmington Lab. Adam Phillips, 910-350-1903, Adam.Phillips@sgs.com, www.sgs.com. Present in more than 40 countries with 91 offices and 52 laboratories, SGS Group has the capability to meet the environmental needs of international, as well as domestic industries, service organizations and governments.

Our sponsors are a valuable resource for the funding of meetings, outreach and educational programs. Please honor their support by giving them your business. If you don't see your firm name here, contact janehgill@aol.com for sponsorship information, or fill out and follow instructions on the form on page 33 of this newsletter.