



25th Annual Meeting
American Society of Mining & Reclamation

AND

10th Meeting

International Affiliation of Land Reclamationist

Richmond † June 14 - 19, 2008

Advance Program & Registration Information



Acid sulfate soil impacts to soil and water quality in Stafford VA



Mineral sands (Ti + Zr) mine on former prime farmland in Dinwiddie VA.

***“New
Opportunities
to Apply Our
Science”***

Major Sponsors (To Date)

Iluka Resources Inc., USDI Office of Surface Mining, Weanack Land LLP,
Virginia Dept. of Mines, Minerals & Energy
Virginia Tech Dept. of Crop & Soil Environmental Sciences

“New Opportunities to Apply Our Science”

Richmond, Virginia, home of the USA’s first commercial coal mine, will host the 25th Annual Meeting of the American Society of Mining and Reclamation in mid-June of 2008. This meeting also serves as the 10th meeting of the International Affiliation of Land Reclamationists (IALR). In addition to ASMR’s historical concentration on coal and metal mining applications, this meeting’s program and field tours will focus on remediation of other disturbances such as exposure of acid-sulfate materials, mineral sands mining, dredge spoil placement, and wetland impact mitigation. We invite attendees and their families to enjoy the wealth of great attractions in and around Richmond!

2008 Program Overview

Day	Time	Event (<i>Program Page # for Details</i>)
Saturday, June 14	8:00 am to 5:00 pm	Pre-Meeting Field Trip (7) <i>Mineral sands mining, dredge spoil utilization, wetland creation, sand & gravel mining.</i>
Saturday (6/14) to Wed. 6/18)	12:00 pm Saturday to 4:30 pm Wednesday	Registration Open in Lower Lobby of Marriott Hotel (2) During Meeting Hours
Sunday, June 15	8:00 am to 5:00 pm 9:30 am to 3:00 pm 5:30 pm to 7:30 pm	3 Short Courses (4) Civil War Battlefields Tour #1 (8) Opening Reception
Monday, June 16	9:00 am to 11:15 am 11:30 am to 12:00 pm 12:00 pm to 2:00 pm 2:00 pm to 5:30 pm 5:30 pm to 7:30 pm	Welcome and Plenary Session (5) ASMR General Business Meeting ASMR Awards Luncheon – 25th Anniversary Technical Sessions and Tech. Div. Meetings (6) Exhibitor’s Reception/Exhibit Hall (3)
Tuesday, June 17	8:15 am to 5:30 pm 5:30 pm to 10:00 pm	Technical Sessions and Tech. Div. Meetings (6) Society Social Dinner at Shirley Plantation (5)
Wednesday, June 18	8:15 am to 4:25 pm 5:30 pm to 8:30 pm	Technical Sessions and Tech. Div. Meetings (6) IALR Reception & Social (3)
Thursday, June 19	8:00 am to 6:00 pm	Post Meeting Field Trips (7/8) <i>1- Mineral Sands Mining and Reclamation</i> <i>2- Historic gold/metal mining and rehabilitation</i> <i>3- Acid sulfate soil impacts and remediation</i>
Monday (6/16) to Wed. (6/18)	8:30 am to 5:00 pm Each Day	Non-Technical Tours (8/9) <i>Colonial Williamsburg, Richmond Gardens & Museums, Busch Gardens</i>
Friday, June 20	9:30 am to 3:00 pm	Civil War Battlefields Tour #2 (9)

Travel, Lodging, and Sightseeing Information

Transportation:

Richmond is served by eight major airlines via the newly-reconstructed Richmond International Airport (RIC) and by Amtrak rail service from the Washington, DC area. The airport is seven miles from downtown Richmond; complete airport information, flight listings, and shuttle/taxi listings are posted at: <http://www.flyrichmond.com/>.

Meeting Venue and Lodging:

The Richmond Marriott will host all meeting functions, technical sessions, and exhibits. The Marriott is located in downtown Richmond, just blocks away from the Virginia Capitol and Civil War museums, and has been completely refurbished over the past two years. We encourage all attendees to stay at the Marriott hotel due to ASMR's contractual arrangements with this fine facility! Several restaurants and pubs are nearby, and we will provide shuttle service in the evenings to more distant restaurant and entertainment locales.

A block of rooms has been arranged for ASMR at the Richmond Marriott (downtown) under the name *American Society of Mining & Reclamation*. The ASMR room rate is \$129 per night plus tax. Additional persons will be charged \$10 per night per room. The current standard/corporate rate at this hotel is \$269 per night. Hotel information and maps are available at the website listed below. **The cut-off date for preferred rate reservations is Wednesday, May 14, 2008.**

Reservations may be made by calling 1-800-228-9290 or on-line at www.marriott.com/ricdt. The group code for on-line registration via the Marriott web site is "marmara". A limited block of government rate rooms is also available at the Federal per diem rate (currently \$115 per night plus tax) for individuals with valid ID at check-in. For on-line government rates, use "amramra" as your group code.

Sightseeing and Family Travel Opportunities in and Around Richmond

Due to the timing and location of this year's ASMR/IALR meetings, we hope that you will consider the following sightseeing and vacation opportunities in and around Richmond:

Major Attractions Within One Hour of Richmond:

Busch Gardens, Colonial Williamsburg, Jamestown Settlement, Kings Dominion, Shirley Plantation, Yorktown Victory Center, and 10+ Civil War battlefields.

Major Attractions Within Two Hours of Richmond:

Washington D.C., Quantico Marine Museum, Smithsonian Aviation Museum/Dulles, Norfolk & Naval Base, Virginia Beach, and many more Civil War battlefields!

Richmond Highlights

Downtown Richmond has undergone a major rebuilding and revitalization program over the past several years, and provides an impressive array of restaurants, museums, historical attractions, and entertainment options (<http://visit.richmond.com/>). Of particular note are the Virginia Museum of Fine Arts, Lewis Ginter Botanical Gardens, Confederate White House & Museum of the Confederacy, Tredegar Iron Works/Civil War Center, James River Canal Walk, and numerous Civil War battlefields nearby.

Sponsorship Opportunities

The following organizations have committed to be major sponsors of ASMR/IALR 2008:

**Iluka Resources Inc.
USDI Office of Surface Mining
Virginia Dept. of Mines, Minerals & Energy
Virginia Tech Dept. of Crop and Soil Environmental Sciences
Weanack Land LLP**

Information on sponsorship opportunities is available at the web link below. All sponsors will be prominently featured in the on-site program and recognized at meeting events. Sponsorship is very important to ASMR as a mechanism to keep registration to a minimum and to encourage student participation. Details on sponsorship opportunities are available at the URL listed below!

ASMR Annual Exhibit and Tradeshow

The ASMR Exhibit and Trade Show is an important part of every meeting and serves as an important focal point for both technical and social interaction. Coffee and refreshment breaks and receptions will be held in this area along with poster presentations. Setup time is scheduled from 12:00 to 5:30 pm on Sunday, June 15, 2008 with breakdown following the afternoon break between 3:00 and 6:00 pm on Wednesday, June 18, 2008. Exhibit & Trade Show registration and logistical information is available at the web link below. Standard exhibitor registration is \$1000 and includes two full registrations.

IALR and International Delegate Recognition

This meeting will serve as the 10th meeting of the International Affiliation of Land Reclamationists (<http://ces.ca.uky.edu/asmr/IALR.htm>). IALR presentations will be highlighted in the program and a special IALR social function will be held (location TBA) on Wednesday evening June 18. International delegates needing assistance with travel arrangements should contact the IALR Coordinator for assistance: W. Lee Daniels (wdaniels@vt.edu).

Program Updates and Information:

http://www.cses.vt.edu/revegetation/ASMR_2008.html

National Executive Committee (NEC) Meetings

The ASMR NEC will meet from 9:00 am to 5:30 pm on Sunday, June 15, and again from 8:30 am to 12 noon on Thursday, June 19. Location TBA at registration.

Workshops/Short Courses, Sunday, June 15

All workshops run from 8 am to 5 pm; CEU's will be granted by Va Tech

Workshop #1: Passive Treatment of Mine Drainage.

Robert S. Hedin, Ph.D. and George R. Watzlaf; Hedin Environmental, Pittsburgh.

The reauthorization of Title IV of the Surface Mining Control and Reclamation Act (SMCRA) will dramatically increase funds available for the treatment of mine water. It has been projected that about \$4 billion will be made available for mine reclamation over the next 10 years, with 30% (up from 10%) of this “set aside” for water treatment. In many states, this will translate into a tenfold increase in funding for the treatment of mine water. Because of this drastic increase in funding, there is a critical need for scientifically sound and practical information in order to successfully design and build passive treatment systems. This course will cover the basics of the biogeochemistry of the formation, mitigation and treatment of acid mine drainage. Passive treatment of mine drainage will be taught from an applied science perspective and include very useful information: the essential water quality/quantity characterization, selection of the proper passive treatment system, correctly sizing the system, successful construction techniques, required maintenance after construction as well as all of the cost associated with these tasks. Practical rules of thumb and information on useful field tests and procedures that will help to ensure the success of passive systems will be provided based on years of experience and empirical data.

Cost: \$150 per person including lunch. Min/Max participants: 15/45.

Workshop #2: Estimating Erosion Rates on Mine Lands: An Introduction To The Revised Universal Soil Loss Equation (RUSLE, Version 2).

Terry Toy, Ph.D., University of Denver (retired).

Successful mine reclamation requires erosion control. The Revised Universal Soil Loss Equation (v.2) is the best, practical tool for estimating erosion rates on mine lands. These erosion-rate estimates, then, provide a solid foundation for erosion-control and reclamation planning. Increasingly, regulatory authorities are requiring, or strongly encouraging, erosion-rate estimates as part of new, revised, or renewed reclamation plans. In this workshop, you will learn the basics of RUSLE 2 use through discussions coupled with “hands-on” exercises. You will learn how environmental conditions influence erosion rates and how RUSLE 2 captures the main effects of these conditions to estimate erosion rates. You will learn how to manipulate RUSLE 2 in order to evaluate the effectiveness of various erosion-control alternatives. You will learn that RUSLE 2 also can provide sediment discharge estimates that can be a part of sediment-control planning. Participants will receive a workbook of RUSLE 2 exercises, a CD containing the RUSLE 2 program, and a user's guide for RUSLE 2 applications on severely-disturbed lands as a part of the registration fee. Participants are expected to bring a laptop computer to the workshop into which the RUSLE 2 program can be loaded (arrange authorization to add a program, if necessary).

Cost: \$175 per person including lunch. Min/Max participants: 5/20.

Workshop Details, Continued

Workshop #3: Recognition and Remediation of Acid Sulfate Soil Conditions.

Zenah Orndorff, Ph.D. (Va Tech), Del Fanning (U. of MD) and W. Lee Daniels (Va Tech).

Acid sulfate soils are increasingly encountered at construction and road-building sites in the mid-Atlantic region as sulfide bearing sediments and rocks are disturbed and oxidize to produce highly acidic seepage waters that stain and damage concrete (see program cover) and other building materials. When these materials are exposed at the surface they produce extremely acidic soils (< pH 3.5) that are impossible to revegetate via conventional method. Exposure of acid sulfate materials also produces acidic sediments and runoff that damage local water quality. This intensive one-day short-course will focus on field recognition, prediction, and remediation of the adverse effects of acid sulfate soil weathering processes. The relationship of acid sulfate occurrence to regional geologic conditions and land disturbance practices will be reviewed in detail. Several case studies will be reviewed in detail including the Stafford Airport and Great Oaks subdivision sites that will be featured in post-meeting Field Trip #3.

Cost: \$125 per person including lunch. Min/Max participants: 5/50.

Plenary Session, Monday, June 16, 9:00 to 11:30 am

A range of speakers from various mining/environmental, non-mining remediation, and regulatory sectors will address the meeting theme, *New Opportunities to Apply Our Science*, from local, national, and international perspectives. Our speakers will include:

Dr. Mike Karmis, Director, Virginia Center for Coal & Energy Research
Mr. John Craynon, USDI Office of Surface Mining, Washington D.C.
Mr. Ed Chu, USEPA National Center for Environmental Economics
Mr. Neil Humphries, Director URS Corp, UK & Ireland

Technical Sessions – Monday to Wednesday, June 16 to 18

Go to http://www.cses.vt.edu/revegetation/ASMR_2008.html for an updated listing of all Technical Session oral presentations (85+) and posters. The overview schedule of Technical Sessions follows on page 6 and a detailed list of all papers as of January 2008 begins on Page 11.

ASMR Dinner, Shirley Plantation, Tuesday, June 17

Buses will depart the Marriott between 4:30 and 6:30 to transport you 20 miles down scenic Route 5 along the James River to Shirley Plantation (<http://www.shirleyplantation.com>). Shirley is Virginia's first plantation (1613) and features the Great House and eight other historic original outbuildings. Those arriving on the earlier buses will be able to tour adjacent research areas (see pre-meeting field trip description) and leisurely explore Shirley Plantation's extensive grounds and outbuildings or take a guided tour of the Great House. A BBQ dinner will be served at 7:00 p.m. followed by a bluegrass band. Beer, wine and soft drinks will be provided throughout the evening. Early buses will return to Richmond departing at 8:30 p.m. with later buses departing by 10:00 p.m. The cost for this event is \$40 per person.

ASMR June 2008 Technical Session Schedule Overview – 85+ Technical Presentations!				
Monday June 16 am	9:00-11:15	Plenary Session		
		Session 1	Session 2	Session 3
Monday June 16 pm	2:00-3:15	1 - Revegetation and Wildlife #1	2 - Soil Reconstruction #1	3 - Mine Water Treatment #1
		Break		
	3:40-4:30	4 - Revegetation and Wildlife #2	5 - Soil Reconstruction #2	6 - Mine Water Treatment #2
	4:30-5:30	TD* - Ecology	TD - Soils and Overburden	TD - Geotechnical Engineering
Tuesday June 17 am	8:15-9:55	7 - Coal Mine Reforestation in Appalachia #1	8 - Beneficial Reuse of Waste Materials #1	9 - Biochemical Reactors for the Treatment of Mining Influenced Waters #1
		Break		
	10:20-noon	10 - Coal Mine Reforestation in Appalachia #2	11 - Beneficial Reuse of Waste Materials #2	12 - Biochemical Reactors for the Treatment of Mining Influenced Waters #2
Tuesday June 17 pm	1:30-2:45	13 - Soil and Overburden Reclamation and Management	14- Reclamation Planning - Land Use #1	15 - Mine Water Treatment #1
		Break		
	3:10-4:25	16 - Reclamation Reforestation	17 - Reclamation Planning - Land Use #2	18 - Mine Water Treatment #2
	4:25-5:30	TD - Forestry and Wildlife	TD - Land Use Planning and Design	TD - Water Management
Wednesday June 18 am	8:15-9:55	19 - International Tailings Reclamation	20 - Reclamation Planning – Remediation #1	21 - OSM/VISTAs: Partners in Remediation
		Break		
	10:20-noon	TD - International Tailings Reclamation	22 - Reclamation Planning – Remediation #2	23 - Stream Water Quality #1
Wednesday June 18 pm	1:30-2:45		24 - Reclamation Planning - Regulatory Issues #1	25 - Stream Water Quality #2
		Break		
	3:10-4:25	*Technical Division Meetings	26 - Reclamation Planning - Regulatory Issues #2	27 - Stream Water Quality #3

A detailed list of all papers as of January 2008 begins on Page 11.

Field Trips and Non-Technical Tours

Pre-Meeting Tour -- Saturday, June 14 -- 8 am to 6 pm.

Mineral sands mining, dredge spoil utilization, wetland creation, sand & gravel mining and reclamation. *Leader: W. Lee Daniels, Virginia Tech*

This field trip will depart the Richmond Marriott at 8 am and travel by vans to the Iluka Mineral Sands mining complex in Dinwiddie County to tour active mining operations, prime farmland reclamation research, and the Virginia Tech/Carraway-Winn cooperative research farm. The tour will then proceed to Vulcan's Puddledock sand and gravel mine near Petersburg for an overview of active mining and reclamation procedures and challenges. The trip will conclude with a visit to Weanack LLP in Charles City County to focus on beneficial conversion of dredge materials to agricultural uses and research on creation of tidal freshwater wetlands. Related details on these sites and associated Virginia Tech research and outreach programs can be found at <http://www.cses.vt.edu/revegetation/>.

Cost: \$50 per person; includes transportation and lunch. Min/Max participants: 10/60.

Post-Meeting Tours – Thursday, June 19 -- 8 am to 6 pm

Cost for all trips: \$50 per person; includes transportation and lunch.

Tour #1 – Mineral Sands Mining and Prime Farmland Reclamation

Leaders: W. Lee Daniels (Va Tech) and Chuck Stilson & Clint Zimmerman (Iluka Resources).

Mineral sands mining for ilmenite, rutile, and zircon will disturb over 5000 acres of prime agricultural farmland in Virginia and North Carolina (USA) over the next 20 years. Mining of the Virginia deposit (Old Hickory) was initiated in 1997 and approximately 1500 acres have been disturbed to date with approximately 500 acres reclaimed to support a mix of agricultural post-mining land uses. This tour will travel to the Iluka Mineral Sands mining complex in Dinwiddie County to tour active mining operations, prime farmland reclamation research and the Virginia Tech/Carraway-Winn cooperative research farm. Mine tour stops will include active mining pits, tailings/slimes backfill and management, topsoil handling, and final grading and reclamation. Reclamation research stops will include pre-mining soils and local geomorphic relationships, soil reconstruction experiments, forage management experiments, and biosolids utilization research on the Carraway-Winn Reclamation Research Farm. Sturdy boots are required for this trip and you should expect to get muddy. Min/Max participants: 10/90.

Info: http://www.cses.vt.edu/revegetation/mine-%20mineral_sands.html

Tour #2 - Historic Gold and Metal Mining and Rehabilitation

Leaders: Allen Bishop and Bob Sobeck, VDMME Div. of Mineral Mining

Mining began at the massive sulfide deposits of the Gold-Pyrite belt in Mineral, Virginia in 1834 with exploration continuing into the 1970's. With 20 metal mines in this area of Louisa and Spotsylvania Counties, this tour will visit several mines along Contrary Creek that have not been reclaimed and the Valzinco Mine where reclamation has recently been completed. Reclaimed under Virginia's Orphaned Land Program, the Valzinco Mine reclamation has seen average annual pH values of 2.6 – 3.9 rise to above 5 and dissolved metal concentrations fall 75 – 99%. The tour will include discussion of the history of the mining in this area, the environmental and safety problems, which continue to exist many years after mining has ceased, and the various techniques to reclaim the sites. Sturdy shoes recommended. Min/Max participants: 10/60.

Tour #3 – Acid sulfate Soil Impacts and Remediation

Leaders: Zenah Orndorff (Va Tech) and Del Fanning (U. of MD)

Acid sulfate soils are increasingly encountered at construction and road-building sites in the mid-Atlantic region as sulfide bearing sediments and rocks are disturbed and oxidize to produce highly acidic soils and local water quality impacts. This field trip will visit a range of acid sulfate soil impacted sites near Fredericksburg including Stafford Regional Airport, Great Oaks Subdivision, and Massaponax. Recognition of acid sulfate soil conditions, associated morphologies, and damage to concrete/soil/water will be reviewed at Stafford Airport along with a tour of areas remediated via use of lime stabilized biosolids. The tour will return via Luck Stone's Caroline sand and gravel mine where active mining/reclamation will be reviewed along with a discussion of remediation of on-site acid-sulfate sediments that were used for pond embankments. Sturdy shoes recommended. Min/Max participants: 10/60.

Info: <http://www.cses.vt.edu/revegetation/remediation.html>

Non-Technical Tours

Sunday, June 15 – Civil War Battlefields Tour #1

Tour vans will depart the Marriott at 9:30 am and travel to Petersburg to meet your dynamic tour guide, Mr. John Marler (<http://www.appomattoxtours.com/>). The tour will start with an overview of the city and the siege. Next, you will take a walk round Battery #5 for a review of the initial Federal assault, and visit the site of the charge of the 1st Maine Heavy Artillery (largest loss of troops in any action during the war...started out with 900+...10 minutes later 632 were dead and wounded). The tour will continue to Lee's last offensive at Fort Stedman and then onto the Battle of the Crater plus other smaller sites. This tour will finish up with a delicious lunch at the Brickhouse Run Pub in restored Petersburg and then your vans will return you to hotel by 3:00 pm. **Cost:** \$50 person including transportation and lunch. Min/Max participants: 20/60.

Monday, June 16 – Colonial Williamsburg and Shopping. Van will depart the Marriott at 8:30 am and transport you to Colonial Williamsburg and area shopping. Return to hotel at 5:00 pm. **Cost:** \$20 per person for transport and assistance by a "local". Admission fees not included. Min/Max participants: 6/24. Info: <http://www.colonialwilliamsburg.com/>

Tuesday, June 17 – Lewis Ginter Botanical Gardens, Virginia Museum of Fine Arts, and other Richmond cultural sites. Van will depart the Marriott at 8:30 am and return at 4:30 pm. **Cost:** \$20 per person for transport and local assistance. Admission fees not included. Min/Max participants: 6/24. Info: <http://www.lewisginter.org/>; <http://www.mfa.org/>

Wednesday, June 18 – Busch Gardens. Van will depart the Marriott at 8:30 am and transport you to Busch Gardens in Williamsburg. **Cost:** \$20 per person for transport and assistance by a “local”. Return to hotel at 5:30 pm. Admission fees are not included. Min/Max participants: 6/24. Info: <http://www.buschgardens.com/BGW/default.aspx>

Friday, June 20 – Civil War Battlefields Tour #2

Tour vans will depart the Marriott at 9:30 am and travel to Petersburg to meet your dynamic tour guide, Mr. John Marler (<http://www.appomattoxtours.com/>). This tour will start with the Battle of Weldon RR followed by a visit to Poplar Grove National Cemetery. Next you will visit Fort Fisher, (largest fort in the Union lines), and the "Fishhook" (where the kickoff for the final charge of Petersburg began. Then it's onto Five Forks battlefield where Custer and other famous soldier fought. The tour will conclude at Ft. Gregg, (the Alamo of the Confederacy). Compared with the first Civil War tour offered on June 15, this tour visit more remote locales and involve more walking. Your vans will return you to hotel by 3:00 pm. **Cost:** \$50 person including transportation and lunch. Min/Max participants: 20/60.

ASMR/IALR 2008 Meeting Committee and Contact Information

Program Chair: *W. Lee Daniels*, 540-231-7175, wdaniels@vt.edu
Crop & Soil Env. Sciences, Virginia Tech

Proceedings: *R.I. Barnhisel**, 859-351-9032, asmr5@insightbb.com
ASMR Executive Secretary

On Site Registration and Exhibits: *Sue Brown*, 540-231-5741, suebrown@vt.edu
Crop & Soil Env. Sciences, Virginia Tech

Local Arrangements: *Chee Saunders*, 804-798-6525, chee.saunders@mma1.com
Marshall Miller & Assoc., Ashland, VA

Field Trips: *Allen Bishop*, 434-951-6310, Allen.Bishop@dmme.virginia.gov
Va. Dept. Mines, Minerals & Energy, Charlottesville, VA

Technical Sessions: *Carl Zipper*, 540-231-9782, czip@vt.edu
Crop & Soil Env. Sciences, Virginia Tech

*R.I. Barnhisel is also the ASMR contact for all inquiries related to manuscript submission and review, meeting pre-registration, and membership applications.

Registration Form -- 2008 ASMR/IALR Meetings, June 14-19, Richmond, VA

<u>Conference Registration</u>		<u>No.</u>	<u>Cost</u>
Early Registration*	\$350	_____	_____
Late Registration* (Postmarked/received after May 2, 2008)	\$400	_____	_____
Student Registration* (With valid ID or ASMR student member)	\$175	_____	_____
One-Day Registration (circle M, T and/or W)	\$200	_____	_____
Spouse/Guest Lunch Tickets (M or T, cost per day)	\$30	_____	_____
Spouse/Guest Registration* (with one paid regular registration)	\$175	_____	_____
ASMR Social Dinner @ Shirley Plantation	\$40	_____	_____
<i>*Includes access to all sessions and exhibits, 2 receptions with food/drinks, 3 continental breakfasts, all day coffee/snack breaks, awards luncheon, Tuesday buffet lunch, and. Proceedings CD.</i>			

<u>Workshops/Short Courses**</u>		<u>No.</u>	<u>Cost</u>
Workshop #1: Passive Treatment of Mine Drainage	\$150	_____	_____
Workshop #2: Estimating Erosion Rates on Mine Lands	\$175	_____	_____
Workshop #3: Recognition/Remediation Acid Sulfate Soils	\$125	_____	_____

<u>Technical Tours**</u> (Transport and lunch included)		<u>No.</u>	<u>Cost</u>
Pre-meeting tour on Saturday, June 14	\$50	_____	_____
Post meeting tours on Thursday, June 19 (Circle tour #1 #2 or #3)	\$50	_____	_____

<u>Non-Technical Tours**</u> (Transport included for all)		<u>No.</u>	<u>Cost</u>
Civil War Battlefields, #1- 6/15 & #2 6/20, w lunch (Circle choices)	\$50	_____	_____
Williamsburg 6/16; Richmond 6/17; Busch G. 6/18 - (Circle choices)	\$20	_____	_____
<i>**Contingent upon minimum participation. Fees will be refunded for low enrollment activities.</i>			

<u>Total registration costs for conference, workshops and tours:</u>	Total	_____
Credit card processing fee:	\$5	_____
<u>No refunds after June 2. Prior to June 2 we will deduct \$50 for cancellations.</u>	Grand Total Due:	_____

Badge Name: _____ Spouse Name: _____

Organization: _____ Special Dietary Needs: _____

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Mail with check or CC information to: ASMR, 3134 Montavesta Rd., Lexington, KY 40502

Registration contacts (R.I. Barnhisel): Ph. 859-351-9032; FAX 859-335-6529; asmr5@insightbb.com

ASMR 2008 Technical Sessions - Preliminary Detailed Schedule

Notes: Title and author information given here is taken directly from abstracts as submitted and may change with final manuscript submission. Acceptance into final program for oral presentation is contingent upon final manuscript submission and approval. Concerns regarding these listings and manuscript status should be directed to R.I. Barnhisel - asmr5@insightbb.com

Papers with first author in bold font are international contributions.

Oral presentations will be 20 minutes with 5 minutes for Q&A

Session 1: Revegetation and Wildlife #1 -- Monday, June 16, 2:00 – 3:15 pm

Assessment of Abandoned Quarries in Lebanon, East Mediterranean for Revegetation and Water Harvesting. **T.M. Darwish**, R. Stehouwer, D. Miller, J. Sloan, I. Jomaa, A. Shaban, C. Khater, and M. Hamzé; National Council for Scientific Research-Remote Sensing Center, P.O. Box: 11-8281, Mansourieh, Lebanon

Reclamation and Revegetation in the Copper Basin: London Mill Area. K. L. Faulk, C.L. Stokes, and F. Miller; Barge, Waggoner, Sumner & Cannon, Inc. Nashville TN

*Root and Shoot in Metalicolous and Non Metalicolous Ecotypes of *Thlaspi Caerulescens* Growing in Mine Soils of Mibladen and Zaida (North West of Morocco).* **Safae Berrah El Kheir**, Nadia Saidi, and Abdelhak Bouabdli; Environment Georesources Laboratory, Geology Department, IBN Tofail University, Kenitra, Morocco

Session 2: Soil Reconstruction #1 -- Monday, June 16, 2:00 -- 3:15 pm

Subsoils As Topsoil Substitutes for Surface Coal Mine Reclamation In Mississippi: Alluvial Floodplains. David J. Lang and George Hawkey; Dept. of Plant and Soil Sci., Miss. State University

Effects of Stockpiling and Topsoil Replacement on Soil Carbon Pools. A.F. Wick, P.D. Stahl, L.J. Ingram, and L. Vicklund; University of Wyoming, Dept. of Renewable Resources, Laramie, WY

Research on Land Reclamation Using the Deep Digging and Shallow Padding Method.

Zheng Liquan, Hu Zhenqi, Zhao Yanling, and Yue Mei; Institute of Land Reclamation and Ecological Reconstruction of China University of Mining & Technology, Beijing, China

Session 3: Mine Water Treatment #1 -- Monday, June 16, 2:00 – 3:15 pm

Microcosm Evaluation of Crab-Shell Chitin for the Remediation of Mine Impacted Water from Three Sites within Central Pennsylvania and Comparison with Other Leading Substrates.

M.A. Robinson-Lora and R.A. Brennan; Department of Civil and Environmental Engineering, The Pennsylvania State University, University Park, PA

Evaluation of Three Different Purities of Crab-Shell for the Remediation of Mine Impacted Water: Uncoupling the Contributions of Chitin, Protein, and Calcium Carbonate. K.M. Korte, C.E. Newcombe, and R.A. Brennan; Department of Civil and Environmental Engineering, The Pennsylvania State University, University Park, PA

The Use of Peat Pellets to Remove Trace Metals from Mine Drainage. Paul Eger, Eric Paulson, and Doug Green; Minnesota Dept of Natural Resources, Division of Lands and Minerals, Box 45 500 Lafayette Road, St. Paul, MN

Session 4: Revegetation and Wildlife #2 -- Monday, June 16, 3:40 -- 5:00 pm

Differential Uptake of Transition Elements by Mesquite Obtained from Plants Grown in Impacted and Clean Sites. Nazmul Haque, Jose R. Peralta-Videa, and Jorge L. Gardea-Torresdey; The University of Texas at El Paso, El Paso, TX

Coal Mining and the Endangered Indiana Bat. Kimery C. Vories; Mid-Continent Region, U.S. DOI Office of Surface Mining, 501 Belle St., Alton, IL

Ecology Technical Division Meeting

Session 5: Soil Reconstruction #2 -- Monday, June 16, 3:40pm – 5:00 pm

Impact of Soil Reconstruction Method on Nitrate Accumulation in Forages Grown for Livestock Feed. Chris D. Teutsch and W. Lee Daniels; Dept. of Crop and Soil Environmental Sciences, Virginia Polytechnic Institute and State University, Blacksburg, VA

Impact of Soil Reconstruction Method on Yield, Nutritive Value and Botanical Composition of a Mixed Cool-Season Grass-Legume Stand. Chris D. Teutsch and W. Lee Daniels; Dept. of Crop and Soil Environmental Sciences, Virginia Poly. Institute and State University, Blacksburg, VA

Utilizing Dredged Sediment for Brownfield Reclamation. Robert Darmody; University of Illinois.

Soils and Overburden Technical Division Meeting

Session 6: Mine Water Treatment #2 -- Monday, June 16, 3:40 -- 5:00 pm

Removal Mechanisms for Constructed Wetlands Receiving Lead Mine Water. Mark Fitch, Joel Burken, and Chang Ye; Civil, Architectural and Environmental Engineering, University of Missouri-Rolla, Rolla, MO

Designing a Biochemical Reactor for Selenium and Thallium Removal, from Bench Scale Testing Through Pilot Construction. E.P. Blumenstein, J. Volberding, and J.J. Gusek; Golder Associates, Inc., 44 Union Blvd #300, Lakewood, CO

Case Studies - Bench Scale Biochemical Reactor Results from Two Sites at the Elizabeth Mine, Vermont. David Reisman; Engineering Technical Support Center, LRPCD, NRMRL, ORD, U.S. EPA, Cincinnati, OH

Geotechnical Engineering Technical Division Meeting

Session 7: Coal Mine Reforestation in Appalachia #1 -- Tuesday, June 17, 8:15 – 9:55 am

Tree Growth, Natural Regeneration, and Hydrologic Characteristics of Three Loose-Graded Surface Mine Spoil Types in Kentucky. Patrick N. Angel, Christopher D. Barton, Richard C. Warner, Carmen Agouridis, Tim Taylor, and Sarah L. Hall; Soil Science, University of Kentucky (UK), Lexington, KY

Evaluating Spoil Amendment Use on Reforestation Productivity in the Eastern and Western Kentucky Coalfields. Christopher D. Barton, Rick J. Sweigard, and Donald Marx; Department of Forestry, UK

Early Tree and Ground Cover Establishment as Affected by Seeding and Fertilization Rates in Tennessee. D. S. Buckley and J. A. Franklin; Department of Forestry, Wildlife and Fisheries, University of Tennessee, Knoxville, TN

Native Hardwood Reforestation after Five Years for Phase III Bond Release. J. A. Burger, D. Mitchem, C. E. Zipper, and R. Williams; Department of Forestry, Virginia Polytechnic Institute and State University, Blacksburg, VA

Session 8: Beneficial Reuse of Waste Materials #1 – Tuesday, June 17, 8:15 – 9:55 am

- Soil Nitrogen Replenishment Resulting from Long-Term Application of Biosolids for Reclamation of Strip-Mined Land.* G. Tian, T.C. Granato, A.E. Cox, R. I. Pietz, and C.R. Carlson, Jr.; MWRD-Chicago, Lue-Hing R&D Complex, 6001 W. Pershing Road, Cicero, IL
- Nutrient Fluxes from Abandoned Mine Soils Reclaimed with Poultry Manure and Paper Mill Sludge.* Ashlee Dere, Richard Stehouwer, and Kirsten McDonald; Penn State Univ., Univ.Park, PA
- Transformation of Phosphorus and Nitrogen in Deep Row Biosolids Incorporation Technology in Coastal Plain Mining Sites in Virginia.* Kirill Kostyanovsky, Katrina Lasley, Beshr Sukkariyah, Gregory Evanylo, and Chao Shang; Dept. of Crop and Soil Environmental Sciences, Virginia Polytechnic Institute and State University, Blacksburg, VA
- Alkaline Addition Problems at the Skytop/Interstate-99 Site, Central Pennsylvania.* Arthur W. Rose and Hubert L. Barnes; Geochemistry, Pennsylvania State University, University Park, PA

Session 9: Biochemical Reactors for the Treatment of Mining Influenced Waters #1
Tuesday, June 17, 8:15 – 9:55 am

- Bench-Scale Studies Comparing Chitin and Organic Substrate on the National Tunnel Waters in Blackhawk, Colorado: Unusual Manganese Removal.* C. Venot, R.A. Brennan, L. Figueroa, T.R. Wildeman, D. Reisman, and M. Sieczkowski.
- Final Results of Two-Year Sulfate Reducing Bioreactor Pilot Test at the Golinsky Mine, California.* James Gusek, Thomas Rutkowski, Eric Blumenstein, and Brad Shipley; Golder Associates, Inc., 44 Union Blvd #300, Lakewood, CO
- Performance of Mesocosm Sulfate-Reducing Bioreactors for Treating Acid Mine Drainage in New Zealand.* Craig A. McCauley, Aisling D. O'Sullivan, Paul A. Weber, and Dave A. Trumm; Department of Civil and Natural Resources Engineering, University of Canterbury (UC), Christchurch, New Zealand
- The Construction and Instrumentation of the Standard Mine Pilot Treatment System.* David Reisman, Thomas Rutkowski, Pat Smart, and James Gusek; Engineering Technical Support Center, LRPCD, NRMRL, ORD, U.S. EPA, Cincinnati, OH

Session 10: Coal Mine Reforestation in Appalachia #2 – Tuesday, June 17, 10:20 – noon

- Survival and Growth of Commercial Hardwoods in Brown vs Gray Sandstone on a Mountaintop Mine in Southern West Virginia.* Paul Emerson and Jeff Skousen; 1112 Agricultural Sciences, Division of Plant and Soil Sciences, West Virginia University, Morgantown, WV
- Fourth-Year Tree Response to Three Levels of Silvicultural Input on Mined Lands.* C. Fields-Johnson, T.R. Fox, J.A. Burger, and C. E. Zipper; Department of Forestry, Virginia Polytechnic Institute and State University, Blacksburg, VA
- Direct-Seeding Versus Containerized Transplantation of American Chestnuts on Loose Mine Spoils in the Cumberland Plateau.* Michael E. French, Christopher D. Barton, and Donald Graves; Department of Forestry, University of Kentucky.
- Phytophthora Occurrence at a Surface Mine Reforestation Site.* Kathryn M. Adank, Christopher D. Barton, and Patricia B. de Sá; Department of Earth and Environmental Sciences, University of Kentucky (UK), Lexington, KY

Session 11: Beneficial Reuse of Waste Materials #2 -- Tuesday, June 17, 10:20 – noon

Evaluation of Leachate Chemistry from Coal Refuse Blended and Layered with Fly Ash. Hunt, Joe, Matt Eick, W. Lee Daniels, and Mike Beck. Dept. of Crop and Soil Environmental Sciences, Virginia Polytechnic Institute and State University, Blacksburg, VA

Use of Fly Ash to Control Acidic and Heavy Metal Pollution from Coal Waste. **Hu Zhenqi**, Zhang, Mingliang, Ma Baoguo, Wand Ping, and Kang Jingtao. Institute of Land Reclamation and Ecological Restoration, China University of Mining and Technology, Beijing, China.

Plant Growth Effects of CCP Amendment to Mine Spoils and Associated Leaching Potentials. Michel A. Beck, W. Lee Daniels, and Matt Eick; Dept. of Crop and Soil Environmental Sciences, Virginia Polytechnic Institute and State University, Blacksburg, VA

Remediation of Acid Sulfate Soils with Lime-Stabilized Biosolids, Lime and Yardwaste Compost. Z.W. Orndorff and W.L. Daniels; Dept. of Crop and Soil Environmental Sciences, Virginia Polytechnic Institute and State University, Blacksburg, VA

Session 12: Biochemical Reactors for the Treatment of Mining Influenced Waters #2 **Tuesday, June 17, 10:20 – noon**

Effect of Substrate on Performance of Field Scale Biochemical Reactors Treating Mine-Influenced Water. David J. Reisman, Linda Figueroa, Amy Pruden, Maria Virginia Prieto, Luciana Pereyra, Sage Hiibe, and Michael Holmes; Engineering Technical Support Center, LRPCD, NRMRL, ORD, U.S. EPA, Cincinnati, OH

Chemical and Microbiological Long-Term Monitoring of Two 1,500-Gallon, Sulfate-Reducing Tanks for the Passive Treatment of Acid Mine Drainage. Ana Ruiz, Linda Figueroa, Marek Zaluski, and Diana Bless; Environmental Science and Engineering, Colorado School of Mines, Golden, CO

Evaluation of Solid and Liquid Phase Organic Substrates Used Sulfate-Reducing Bioreactors for the Treatment of Mining Impacted Water. Christophe Venot, Linda Figueroa, James J. Gusek, Thomas Wildeman, Mike Holmes, and David Reisman.

Session 13: Soil and Overburden Reclamation and Management **Tuesday, June 17, 1:30 – 2:45 pm**

Reclamation of Acid forming Mine Spoils in Paracatu, Minas Gerais State, Brazil. **Luiz Eduardo Dias** and Igor Rodrigues de Assis; Soil Department, Federal University of Viçosa, Viçosa-MG. Brazil

Standard Weathering Procedure for Coal Overburden, Inter-Laboratory Study of Leachate Composition. Eric F. Perry, B. Keith, C. Brady, Roger J. Hornberger, and Joan Cuddeback; Office of Surface Mining, 3 Parkway Center, Pittsburgh, PA

Effect of Na-Bentonite and Mycorrhizae on Remediation of Cadmium Contaminated Soil. **Xiuhong Yang**, Zhenqi Hu*, Xiumin Yang, Shilu Tang, Ning Li; Institute of Land Reclamation and Ecological Restoration, China University of Mining and Technology, Beijing, China

Session 14: Reclamation Planning - Land Use #1 – Tuesday, June 17, 1:30 – 2:45 pm

- Cimarron Ponds Post-Mining Housing Development: 28 Years of Visual Quality Change.* E.J. Lee and J.B. Burley; Landscape Architecture Program, School of Planning, Design, and Construction, Michigan State University, 101 UP&LA Building, E. Lansing, MI
- Creative Landforming for Mine Reclamation Integrating GIS Analysis, Visualization and Computer Based Landform Design Tools.* Charles Yuill; Natural Resource Analysis Center, West Virginia University, 2008 Agricultural Sciences Building, Morgantown, WV
- The Application of RS and GIS to the Environmental Monitoring of Typical Chinese Coal Mining Area in Loess Plateau-A Case Study in Shenfu Coal Mine Site.* Yanling Zhao, and Shilu Tang, China University of Mining and Technology, Beijing.

Session 15: Mine Water Treatment #1 – Tuesday, June 17, 1:30 – 2:45 pm

- Passive Treatment of Acid Mine Drainage – The Enos Reclamation Project, Indiana: Preliminary Results.* Paul T. Behum, Dan R. Hause, Mark A. Stacy, and Tracy D. Branam; OSM, Mid-Continent Regional Office
- An Innovative Source Treatment Technology for Acid Mine/Rock Drainage.* Song Jin, Jeffrey Morris, Paul Fallgren, and Ronald Gossard; Western Research Inst., 365 North 9th St., Laramie, WY
- Watershed-Scale Environmental Monitoring to Prioritize Mine Drainage Passive Treatment Implementation.* R.W. Nairn, K.A. Strevett, J. LaBar, A. Sutter, J. Clifton, W. Strosnider, J. Brumley, and D. Lutes; Center for Restoration of Ecosystems and Watersheds, School of Civil Engineering and Environmental Science, University of Oklahoma, Norman, OK

Session 16: Reclamation Reforestation – Tuesday, June 17, 3:10 – 5:00 pm

- Successful Oak-Bottomland Restoration in the Missouri River Floodplain.* Stephen Harris; RPM Ecosystems LLC, 2150 Dryden Road, P.O. Box #6, Dryden, NY
- Revegetation on Tin-Mined Land Using Various Local Tree Species in Bangka Island, Indonesia.* Nurtjahya Eddy, Setiadl Dede, Guhardja Edi, Muhadiono, and Setiadi Yadi; Program Studi Biologi, Universitas Bangka Belitung, Indonesia
- Scots Pine Ecosystem Biogene Budgeting in Reclaimed Mine Soil on External Slopes of a Lignite Mine in Central Poland.* Marcin Pietrzykowski; Department of Forest Ecology, Forest Faculty, Agricultural University of Cracow, Al. 29 Listopada 46, Pl. 31 – 425 Cracow, Poland.

Forestry and Wildlife Technical Division Meeting

Session 17: Reclamation Planning - Land Use #2 – Tuesday, June 17, 3:10 – 5:00 pm

- Cow-Calf Production on Reclaimed Surface Mined Pastures in Appalachia.* Chris D. Teutsch, Mike Collins, and David C. Ditsch; Dept. of Crop and Soil Environmental Sciences, Virginia Tech, Blacksburg, VA.
- Farmland Restoration and Pollution Prevention in the Overlapped Areas of Crop and Mineral Production.* Fu Meichen, Hu Zhenqi, Liu Shuang, Zhang Jianjun, and Zhang Lanlan; School of Land Sciences and Technology, China University of Geosciences, Beijing, China
- Where Next for Knowledge Needed for Sustainable Reclamation and Regeneration in the UK?* R.N. Humphries, URS Corporation, Derby, UK.
- Post-Mine Land Use and Sustainability Optimization using the Geofluv™ Approach.* Brian Parker, Marshall Miller & Assoc., Richmond, VA.

Land Use Planning and Design Technical Division Meeting

Session 18: Mine Water Treatment #2 – Tuesday, June 17, 3:10 – 5:30 pm

Generation of > 500 Mg/L Alkalinity in a Vertical Anoxic Limestone Drain. J.A. LaBar, R.W. Nairn, and G.A. Canty; Center for Restoration of Ecosystems and Watersheds, School of Civil Engineering and Environmental Science, University of Oklahoma, 202 West Boyd St., Norman, OK

Get the Iron out of Your System. K. Spangler, L. Figueroa, and B. Honeyman; Division of Environmental Science and Engineering, Colorado School of Mines, Golden, CO

Sustainable Passive Treatment of Mine Drainage: Demonstration of Manganese Resource Recovery. Clifford Denholm, Timothy Danehy, Shaun Busler, Robert Dolence, and Margaret Dunn; BioMost, Inc., 3016 Unionville Rd., Cranberry Twp., PA

Self-Sustainable Mine Drainage Treatment. Robert S Hedin, Hedin Environmental, Pittsburgh, PA

Water Management Technical Division Meeting

Session 19: International Tailings Reclamation – Wednesday, June 18, 8:15 – 9:55 am

The Influence of Soil Reconstruction Techniques on Mineral Sands Mine Soils in Virginia. K. Meredith, W.L. Daniels, Z. Orndorff, M. Alley, and C. Teutsch; Dept. of Crop and Soil Environmental Sciences, Virginia Polytechnic Institute and State University, Blacksburg, VA

Advances in Reclamation at Iluka's Mineral Sand Mines in Virginia. Clint Zimmerman, Chuck Stilson, P.E., W. Lee Daniels; Iluka Res. Inc., Stony Creek, VA, and Virginia Tech.

Testing and Analyses of Chat and Asphalt-Containing Chat. Souhail R. Al-Abed, David J. Reisma, Gautham Jegadeesa, Niranjan Deshpande, and Bruce Morrison; Waste Management Branch, LRPCD, NRMRL, Office of Research and Development, U.S. EPA, Cincinnati, OH

A Two-Phase Process on the Revegetation of Acidic Bauxite Tailing Ponds in the Amazon Region, Brazil. L.E. Dias, A.A. Franco, E.F.C. Campello, S.M. Faria, A.F. Castilho, and J.C. Henriques; DPS/Universidade Federal de Viçosa, Viçosa-MG, Brasil

International Tailings & Reclamation Technical Division Meeting (After break)

Session 20: Reclamation Planning & Remediation #1 – Wed., June 18, 8:15 – 9:55 am

Assessment and Closure of the Glengarry Adit, New World Mining District, Cooke City, Montana. M. B. Marks, A. R. Kirk, and M. Cormier; Geologist, USDA Forest Service, Gallatin Natl. Forest, Bozeman, MT

Development and Application of Pre-Remedial Design Tool for the Clark Fork River Superfund Site. D. Neuman, P. Hansen, D. Smith, K. Knutson, and S. Brown; Reclamation Research Group, Bozeman, MT

Remedial and Reclamation Cost Estimating for Large Mine Sites. Gunnar R. Emilsson and Charles Freshman; CDM, 50 West 14th Street, Helena, MT

Physical and Chemical Assessment of the Maude Monroe Mine Site: A Group Field Project for Engineering Students. V. S. Franciscus, J. F. Ranville, T. R. Wildeman, and S. Frail; Division of Environmental Science and Engineering, Colorado School of Mines, Golden, CO

Session 21: OSM/VISTAs: Partners in Remediation - Wed., June 18, 8:15 – 9:55 am

Acid Mine Drainage Remediation in a Small Watershed. Jaclyn D. Long; OSM/VISTA, Savage River Watershed Association

Friends of Deckers Creek - the Clean Creek Program. James Nutaitis

Where Did All the Water Go? Randall Drake Asberry, OSM/VISTA: Friends of the Cheat

Administering a Brownfields Assessment Grant. Greg Taylor; OSM/VISTA, Upper Guyandotte Watershed Association

Session 22: Reclamation Planning – Remediation #2 - Wednesday, June 18, 10:20 – noon

A Hydrologically Networked Watershed Model for Evaluating and Treatment Scenarios. Michael Strager, Vishesh Maskey, Brady Gutta, Richard Herd, Jenifer Fulton, Todd Petty, James Stiles, Julie Svetlik, and Paul Ziemkiewicz; West Va. Water Res. Institute, West Va. Univ., Morgantown, WV

Optimizing Management of PAH Contaminated Sediment from the Appomattox River Federal Navigation Channel. G. Tracey, G. Berman, S. Insalaco, S. Powell, R. Pruhs, R., Reali; W.L. Daniels; C. Carter; SAIC, 221 Third St., Newport, RI

Simplified Water Quality Modeling and Strategic Watershed and Restoration. James M. Stiles; Limestone Engineering, PO Box 715, Reedsville, WV

Acrylic Polymers as Used in the Mining Industry. Lola M. Green and John Vermillion; Environmental Products & Applications, Inc., 73-710 Fred Waring Dr., Suite 220, Palm Desert, CA

Session 23: Stream Water Quality #1 -- Wednesday, June 18, 10:20 – noon

Strategic Restoration of West Virginia Watersheds Impaired by Historic Acid Mine Drainage. J. Todd Petty, Brady Gutta, Richard Herd, Jennifer Fulton, James Stiles, Michael Strager, Julie Svetlick, and Paul Ziemkiewicz; West Va. Water Res. Inst., West Va. Univ., Morgantown, WV

Changes in Flow and Acidity over Various Time Spans in Five Underground Mines in West Virginia. Ben Mack and Jeff Skousen; Division of Plant and Soil Sciences, West Virginia University, Morgantown, WV

Quantity and Quality of Streamwater Draining Mined Areas of the Upper Schuylkill River Basin, Schuylkill County, Pennsylvania, 2005-2007. Charles A. Cravotta III and John M. Nantz; U.S. Geological Survey, Pennsylvania Water Science Center, New Cumberland, PA

Preliminary Results: Release of Metals from Acid-Mine Drainage Contaminated Streambed Sediments under Anoxic Conditions. Barbara A. Butler and David Reisman; Land Remediation and Pollution Control Division of the National Risk Management Research Laboratory of the U.S. EPA, Cincinnati, OH

Session 24: Reclamation Planning - Regulatory Issues #1 – Wed., June 18, 1:30 –2:45 pm

Second-Generation SMCRA. W. Clark Ashby, Clay A. Kolar, and Jack Nawrot; Plant Biology, Southern Illinois University, Carbondale, IL

Enforcement versus Compliance Assistance. Stephen M. Testa and James S. Pompy; California State Mining and Geology Board, 801 K Street, Suite 2015, Sacramento, CA

Using Environmental Permits for Boosting the Environmental Performance of Large-Scale Lignite Surface Mining Activities in Greece. Z. Agioutantis and F. Pavludakis; Dept of Mineral Resources Engineering Technical University of Crete, Greece

Session 25: Stream Water Quality #2 -- Wednesday, June 18, 1:30 –2:45 pm

Hydrologic and Aquatic Impacts from a Landslide in the Tennessee Coal Fields. Robert G. Liddle and Steve Bakaletz; U.S.D.I. Office of Surface Mining, 710 Locust St., Knoxville, TN

Water Quality Prior to and after Reclamation at the Abandoned Valzinco Zn-Pb Mine Site, Spotsylvania County, Virginia. Robert R. Seal, II, Jane M. Hammarstrom, Allen Bishop, Nadine M. Piatak, Denise M. Levitan, Edward Epp, and Robert Sobeck; US Geological Survey, 954 National Center, Reston, VA

A Legacy of Nearly 500 Years of Mining in Potosí, Bolivia: Receiving Stream Water Quality. W.H. Strosnider, R.W. Nairn and F. Llanos; Center for Restoration of Ecosystems and Watersheds, School of Civil Engineering and Environmental Science, University of Oklahoma, 202 West Boyd St. Norman, OK

Session 26: Reclamation Planning - Regulatory Issues #2 – Wed., June 18, 3:10 –4:25 pm

Mining Project Approvals in Western Australia. B. Clark and K. Lindbeck; Keith Lindbeck & Associates, PO Box 144, Bull Creek, Western Australia, 6149, Australia

ITRC – Improving Regulatory Acceptance for New Approaches to Mine Waste Issues. Paul Eger, Cherri Baysinger, and Steve R. Hill; Minnesota Dept of Natural Resources, Division of Lands and Minerals, Box 45 500 Lafayette Road, St. Paul, MN

Session 27: Stream Water Quality #3 -- Wednesday, June 18, 3:10 –4:25 pm

Changes in Metal and Sulfate Concentrations over Time in Fourteen Upper Freeport and Four Pittsburgh Underground Mines in West Virginia. Ben Mack and Jeff Skousen; Division of Plant and Soil Sciences, West Virginia University, Morgantown, WV

Approaches to Complying with Water Quality Standards for Selenium. Jarvis Harper and Jim Malcolm, FTN Associates, Ltd. Little Rock, AR

Acid Mine Reclamation in Spotsylvania County, Virginia, USA: Using Water Chemistry and Vegetation Re-establishment as a Measure of Success. Robert G. Sobeck, Jr., James Perry, Allen Bishop, and Edward Epp. Metcalf & Eddy/AECOM, Washington, DC, Va. Inst. Marine Science, and Va. Div. Mineral Mining.

Poster Presentations

Revegetation of Gold Mine Tailings in Nopiming Provincial Park, Manitoba. S. Renault, J. Markham, L. Davis, and M. Martin; Dept. of Biological Sciences, University of Manitoba, Winnipeg, R3T 2N2, MB, Canada

Prime Farmland Soil Reconstruction: the Past, Present, and Future. H. Raymond Sinclair, Jr. and Robert R. Dobos; USDA-Natural Resources Conservation Service, Federal Building, Lincoln, NE

Research Initiatives for Developing Passive-Treatment Technologies for Ameliorating Acid Mine Drainage in New Zealand. Craig A. McCauley, Aisling D. O’Sullivan, Paul A. Weber, Dave A. Trumm, Andrew K. Brough, and Mark W. Milke; Department of Civil and Natural Resources Engineering, University of Canterbury (UC), Christchurch, New Zealand

Chitin as a Fractional Amendment to Spent Mushroom Compost to Enhance the Efficiency and Effectiveness of Biological Acid Mine Drainage Treatment. C.E. Newcombe and R. A. Brennan; Department of Civil & Environmental Engineering, The Pennsylvania State University, University Park, PA

Characterization of Bacterial Communities Associated with Low-pH Fe(II) Oxidation in Coal Mine Drainage. John M. Senko, Mary Ann Bruns and William D. Burgo, Department of Civil and Environmental Engineering and Dept. Crop and Soil Sciences, The Pennsylvania State University.

Characterization of Mn(II)-Oxidizing Bacterial and Fungal Communities in Coal Mine Drainage Treatment Systems. Hui Tan, Cara M. Santelli, Colleen M. Hansel, John M. Senko and William D. Burgos. Department of Civil and Environmental Engineering, The Pennsylvania State University; and School of Engineering and Applied Science, Harvard University

Notes: Title and author information given here is taken directly from abstracts as submitted and may change with final manuscript submission. Acceptance into final program for oral presentation is contingent upon final manuscript submission and approval. Concerns regarding these listings and manuscript status should be directed to R.I. Barnhisel - asmr5@insightbb.com