

**REGISTRATION FORM**

Please print or type  
(For additional registrations, copy this form)

Detach or copy and mail with check to:  
Geo/Environmental Associates, Inc.  
3502 Overlook Circle  
Knoxville, TN 37909

Name \_\_\_\_\_

Phone: 865-584-0344

Company \_\_\_\_\_

Street/P.O. Box # \_\_\_\_\_ City \_\_\_\_\_

State \_\_\_\_\_ Zip Code \_\_\_\_\_

Phone Number \_\_\_\_\_

COAL REFUSE DISPOSAL FACILITY SEMINAR  
Make check for \$150 payable to:  
*Geo/Environmental Associates, Inc.*

Email address \_\_\_\_\_



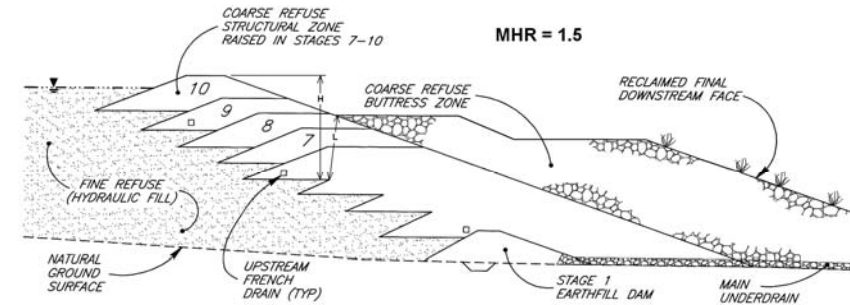
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**COAL REFUSE DISPOSAL FACILITY SEMINAR**

**COAL REFUSE DISPOSAL FACILITY SEMINAR**

-- SIMPLIFIED SEISMIC DESIGN --

- Seismic screening
- Seismic stability/deformation
- Maximum Hinge Ratio (MHR)
- Modified upstream construction
- Old Indian Tricks (OITs)
- $D_{min}$
- Case histories



**Embassy Suites Charleston**  
300 Court Street, Charleston, WV 25301  
Friday, April 16<sup>th</sup>, 2010



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## SEMINAR OBJECTIVE

### **BACKGROUND AND OVERVIEW**

The Mine Safety and Health Administration (MSHA) released a second edition of its Engineering and Design Manual for Coal Refuse Disposal Facilities in December 2009. The manual contains new requirements for seismic design, which may intimidate the uninformed.

This seminar provides an overview of what is now required to assess seismic stability and deformation for coal refuse disposal facilities containing fine coal refuse. Presentations are geared toward those who manage and build these structures. The objective is to provide attendees with an understanding of the new requirements so they can make informed decisions.

A simplified method of screening will be presented based on the hinge ratio. Case histories have been prepared for facilities with a Maximum Hinge Ratio (MHR)  $\leq 1.5$  to enable participants to see what was done during early stages of construction to enable seismic stability and deformation for later stages to be verified using conservative, default seismic strength.

Case histories will also be presented for facilities with MHR  $> 1.5$ , where higher seismic strength must be justified, to illustrate the advantages of planning construction so MHR can remain  $\leq 1.5$ . Hands-on exercises will let you perform simplified seismic screening using a method so easy that even a caveman can do it.

Finally, Bubba Bignozi, Ray Bob (Tiny), and the Old Indian Chief will make guest appearances to explain the new requirements in their own words; with their insight, what might seem complicated becomes simple.

### **PROGRAM**

Friday, April 16, 2010

8:00 to 8:30 am	Registration
8:30 am to Noon	Introduction and Overview of Simplified Seismic Design Approach
	MHR $\leq 1.5$ Case Histories and Testing Procedures
Noon to 1:00 pm	Lunch (Provided with Presentation on Operation Springboard)
1:00 to 5:00 pm	MHR $> 1.5$ Case Histories
	Seismic Deformation
	Simplified Seismic Design According to MSHA Protocol
	Group Exercise with Question and Answer Session

Note: Breaks will be provided between various sessions

### **INSTRUCTOR**

Barry K. Thacker, P.E. of Geo/Environmental Associates, Inc. will lead the seminar.

### **PDH CREDITS**

Eight (8) Professional Development Hours (PDH) will be awarded towards continuing professional competency requirements.

### **SEISMIC SCREENING TOOL**

Attendees will receive a complimentary tool and instruction manual for performing preliminary seismic screening.



### **REGISTRATION FEE AND ENROLLMENT**

A registration fee of \$150 per person includes course notes, seismic screening tool, luncheon, and refreshments during breaks. To register, complete and mail the attached form with payment to:

Geo/Environmental Associates, Inc.  
3502 Overlook Circle  
Knoxville, TN 37909  
(865) 584-0344 Fax: (865) 584-0778

### **LIMITED SEATING – REGISTER EARLY**

Seminar proceeds will be donated to state chapters of the American Chestnut Foundation involved in “Operation Springboard”, the plan for restoring the American chestnut to mine land in Appalachia.

### **ACCOMMODATIONS**

The seminar will be held at the Embassy Suites, 300 Court Street, Charleston, WV 25301. A limited block of rooms has been reserved at the special rate of \$129 per night. Call (304) 347-8700 for reservations. **REFERENCE “GEO” BY PHONE RESERVATIONS OR ONLINE FOR THIS RATE.** After March 31, the rooms will no longer be available at this rate.

### **OTHER AREA HOTELS YOU MAY CHOOSE:**

Charleston Town Center Marriott 304-345-6500  
Hampton Inn Downtown 304-343-9300  
Holiday Inn Express 100 Civic Center Dr. 304-345-0600  
Charleston Plaza Washington St. 304-345-9779  
Fairfield Inn Washington St. 304-343-4661

### **GUARANTEE**

If you are not completely satisfied with what you learn at this seminar, your registration fee will be refunded and you can keep your seismic screening tool.

Questions? Contact Carol Moore at 865-584-0344 Ext. 102 or [clmoore@geoe.com](mailto:clmoore@geoe.com) or visit our web site at [www.geoe.com](http://www.geoe.com) for more details.