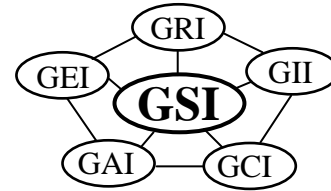


Geosynthetic Institute

475 Kedron Avenue
Folsom, PA 19033-1208 USA
TEL (610) 522-8440
FAX (610) 522-8441



1½ Day Short Course

June 24-25, 2008

U.S. Bureau of Reclamation
Technical Service Center (TSC)
Denver, CO 80225

Day 1: Classroom - QC/QA of Geosynthetics:

Day 2: ½ Day Tour-Demo – Colorado Linings (Fabricator-Installer)

Description: This 1½ day course focuses on the quality control and quality assurance of geosynthetics as placed in permanent and critical applications. The course is only open to Reclamation personnel and is being tailored for the QC/QA of the geosynthetics for the Drop 2 Storage Reservoir, including geomembranes, geotextiles and geonet composites. The course emphasizes manufacturing and installation. QC/QA is widely recognized as critically important factors in overall quality management of containment facilities. The best of designs and regulatory requirements will not necessarily translate to good containment facilities unless the facility is properly constructed with first quality materials. The course covers, CQA principles and plans, CQA documentation, material acceptance and storage, installation of clay liners, GCL liners, geomembranes, geotextiles, geocomposites, geogrid and geocomposites, seaming of geosynthetics, sampling plans, geomembrane seam testing, review of test results and nondestructive testing.

Instructor: George Koerner, Ph.D., P.E. & CQA

Dr. Koerner is Director Designate of the Geosynthetic Institute (GSI) in Folsom, PA. He is in charge of Laboratory accreditation, product certification and test method development at GSI. He also is a project manager and has published over 75 technical papers in his 20-year association with geosynthetic. George's Ph.D. is from Drexel University in Geotechnical Engineering. He is a registered professional engineer in Pennsylvania and New Jersey as well as an ASQ Certified Quality Auditor. George has had involvement with over 350-geosynthetic projects worldwide. He served as a Technical Reviewer of USEPA Technical Guidance Document: QAQC for Waste Containment Facilities (EPA/600R-93/182, Sept. 1993) and was editor of the NICET exam for QA/QC of geosynthetics. He is also the director of the GCI and is in charge of managing the GCI-ICP with its nearly 300 certified inspectors.

Summary of Handouts:

Handouts of power point presentation (over 150 slides) will be handed out at the short course to all participants. In addition, selected Manufacturer's literature will be available in the back of the room on first come first served basis.

CEUs: 0.8 to be given out by GSI for all who complete the course.

Course Outline:

June 24, 2008

8:00-8:15	Welcome and Introduction
8:15-8:30	QC/QA Principles and Philosophy
8:30-9:30	Introduction to Geosynthetics and Geosynthetic Manufacturing
9:30-10:30	Geomembranes: Shipping, receiving, handling, storage, installation, seaming
10:30-10:45	Break
10:30-11:15	Geomembranes (continued)
11:15-12:15	GCLs and CCLs
12:15-1:00pm	Lunch
1:00-2:00	Geotextiles and geogrids
2:00-3:00	Geonets and geocomposites
3:00-3:15	Break
3:15-4:15	The details (appurtenance, nondestructive testing etc)
4:15-4:45	Paperwork and record keeping

June 25, 2008

8:00-Noon - Reclamation has arranged for an optional ½-day tour of Colorado Lining International (fabricator and installer of geomembranes) located in Parker, Colorado. The installer will demonstrate seaming and QC/QA testing of 60-mil HDPE geomembrane for Drop 2 Storage Reservoir, including:

- Double-Wedge Welding of 60-mil textured HDPE
- Extrusion Welding of 60-mil HDPE Patch
- Destructive and Non-Destructive Testing of Geomembrane Seams

Transportation will depart the Denver Federal Center at 8 am and return at Noon.

Reclamation Contact: Jay Swihart (303) 445-2397 jswihart@do.usbr.gov

Target audience:

Consultants and Inspectors involved in QC/QA activities: Federal, state, regional personnel that oversee projects and owner representatives of containment facilities.

REGISTRATION FORM
GSI's Continuing Education Short Course

PLEASE TYPE OR PRINT CLEARLY

Course: QC/QA of Geosynthetics – June 24-25, 2008

Name: _____

Position: _____

Company: _____

Address: _____

City/State: _____

Zip: _____

Telephone: _____

E-mail: _____

Registration Fee: \$150/person up to one month prior to course date, \$200/person thereafter. (This course in Denver is only open to U.S. Bureau of Reclamation Personnel). Includes notes, refreshments and tour. Please note that lunch is not included in the registration fee. However, there will be a cafeteria on site where lunch can be purchased.

Make Check or Purchase Order Payable to:
"Geosynthetic Institute"
Mail to: Geosynthetic Institute
475 Kedron Avenue
Folsom, PA 19033-1208
Questions: Marilyn Ashley or Paula Koerner
Phone: (610) 522-8440
Fax: (610) 522-8441
E-mail: mvashley@verizon.net

Cancellations: There will be a \$25 cancellation fee for refunds requested within one month prior to course date -- \$50 thereafter.

Certificates: Earn 0.8 Continuing Education Units (CEUs) per course, i.e., 1.0 Professional Development Hour = 0.1 CEUs

LOGISTICS AND HOTEL INFORMATION

The Seminar will be held at the U.S. Bureau of Reclamation
Denver Technical Service Center (TSC)
Denver Federal Center
6th and Kipling
Bldg 67, Room 994
Denver, CO 80225

Reclamation Contact: Jay Swihart (303) 445-2397

Reclamation has reserved a block of rooms at the Sheraton Denver West Hotel (360 Union Blvd, Lakewood, CO 80228), located just west of the Denver Federal Center. The government rate is \$140 per day. Please make your reservations by May 26th and indicate that you are participating in the "BOR QC/QA Seminar". Please call the hotel directly to make your reservations at (303) 987-2000.

For further information or comments about this short course please contact George Koerner at the following:

