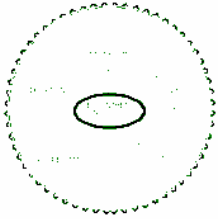




CQA Training Event



Accredited Geosynthetic Laboratories
Accreditation Designation # GAI-LAP-95-01



- **Construction QA/QC for Geosynthetic Installations**
Thursday, Nov. 04, 2010
- **Construction QA/QC for Compacted Clay Liner and GCL**
Installation Friday, Nov. 05, 2010
- **Geosynthetic Institute (GSI) - CQA Inspectors Certification**
Program - CQA CERTIFICATION EXAM Saturday, Nov. 06,
2010

Location:



MONASH University

Monash Conference Center
Level 7, 30 Collins Street
Melbourne, Victoria 3000
Australia

About the Training Courses

Field CQC / CQA Training (Nov. 04-05)

Construction quality control (CQC) and construction quality assurance (CQA) are widely recognized as critically important factors in overall quality management for waste containment facilities and geosynthetic lining applications. The best of designs and regulatory requirements do not necessarily translate to successful and compliant waste containment facilities or containment applications unless the systems are properly constructed. These two 1-day courses have been specifically targeted to those persons who have a need for a detailed understanding of proper CQC and CQA procedures for waste containment facilities, lined ponds and cover systems and are preparing for the Geosynthetic Certification Institute's certification exam. This course is intended to aid those who are preparing CQC/CQA plans, reviewing CQC/CQA plans, performing CQC/CQA observations and tests, and reviewing field CQC/CQA procedures. These people include



These people include

- Specifying/Certifying Engineers
- Construction/Quality Assurance Project Managers
- Installers/Contractors
- Third Party Inspectors
- Regulators
- Manufacturers

These two courses present the materials in two parts, each complementing the other to provide maximum benefit. The first day focuses on installation of geomembranes, geotextiles, geocomposites, geogrids and geoapertenances. A geomembrane seaming demonstration will be provided to all students with detailed explanation and demonstration of seam peel and shear testing. The second day focuses on the installation of compacted clay and geosynthetic clay liner (GCLs). Special emphasis will be given to establishing rationale and standard operating procedures for field inspections, documentation of test and visual observations and implementation of CQA plans. A broad based appreciation for the manufacturing and installation of waste containment facility materials will be provided.

GCI CQA Certification Exam (Nov. 6, 2010)

Each CQA course student will be allowed to sit for the Construction Quality Assurance-Inspectors Certification Program (CQA-ICP) exams immediately following the CQA courses if they meet requirements and have applied to take the test with GCI. The GCI exam itself is part of the GCI CQA technician certification program. Thus, one MUST REGISTER with the Geosynthetic Institute (GSI) and pay their required certification fee in order to take this exam. TRI does NOT collect this fee as it must be paid directly to the Geosynthetic Institute (GSI, phone: 610-522-8440 or mvashley@verizon.net). <http://www.geosynthetic-institute.org/#>

Why you should attend

Awareness of construction QA of geosynthetics is of the highest value to all those who work with geosynthetic materials. Each student will be provided a certificate of course completion, suitable for use in proposals and statements of qualifications for CQC/CQA work. This unique two-day dedicated CQA training event is a wonderful opportunity for professional growth and business development.

Lodging for the courses

Monash University Preferred Hotel Vendors

Punthill Manhattan 57 Flinders Lane Melbourne VIC 3000 Reservation: 1300 731 299 www.punthill.com.au	Sofitel Melbourne on Collins 25 Collins Street Melbourne VIC 3000 Tel: 9653 0000 / 9653 7757 Fax: 9653 7733 www.sofitel.com/1902	Oaks On Collins 480 Collins Street Melbourne Vic. 3000 Reservations: 1300 786 603 www.theoaksgroup.com.au
Medina Executive Flinders Street 88 Flinders Street Melbourne Vic. 3000 Tel: 8663 0000 www.togahotels.com.au	Oaks On Lonsdale 23-33 Lonsdale Street Melbourne Vic. 3000 Reservations: 1800 642 833 www.theoaksgroup.com.au	Stamford Plaza –Melbourne 111 Little Collins St Melbourne VIC. 3000 Tel: 9659 1000 Fax: 9659 0333 www.stamford.com.au

Parking

Discount parking is available at the Wilsons Platinum Parking on 30 Flinders Lane and is part of the Sofitel Hotel/Collins Place. Entry is via Flinders Lane at Parliament House. Tickets must be presented to the Monash Conference Centre staff for validation.

ABOUT TRI

TRI/Environmental, Inc. (TRI) has been active in geosynthetics testing, inspection research and development for over thirty years and is recognized as one of the most accomplished geosynthetics laboratories in the world. TRI is an independent, third party laboratory unaffiliated with any manufacturing, engineering/consulting, or construction management firm.

Download registration forms for the courses and exams at www.GeosyntheticTesting.com

INSTRUCTORS

Sam Allen - Vice President and Division Manager

Mr. Allen is the Vice President of the Texas Research International (TRI) Geosynthetics Services Division. Sam is the past Chairman of Committee D35 on Geosynthetics within ASTM. Sam also serves on the Technical Advisory Board of Geosynthetics magazine and is special advisor to the In the Lab column presenting testing issues. Sam currently serves on the Board of Directors of the Geosynthetics Institute in Folsom, PA and the International Geosynthetics Society. Sam also currently serves on the Waste Management Inc. (WMI) Geosynthetic task force creating the corporate standards for CQA.

John Allen, M.S., P.E. – Director, TRI Interaction / Geotechnical Laboratories

Mr. Allen is the Director of the Geosynthetic Interaction and Geotechnical Laboratories at Texas Research International's (TRI) Geosynthetics Services Division. John is the subcommittee chair of D35.04 on interface friction strength of GCLs within ASTM. He currently oversees slope stability testing for over 200 different sites each year. John also has over 1 million square feet of CQA experience in North and South America for compacted clay liners and geomembrane installation.

Special Guest Instructor: Dr. Robert Gilbert, P.E. - Professor, University of Texas at Austin, USA

Robert (Bob) Gilbert, Ph.D., P.E. is a professor of civil engineering at The University of Texas at Austin. He has more than ten years of consulting experience in the design and construction of landfill lining and cover systems. He has authored or co-authored numerous publications on the stability of these systems. Dr. Gilbert has been very instrumental in understanding clay and GCL liner systems, interface friction testing, and the use of data for slope stability design.

Special Guest Lecturer: Dr. A (Malek) Bouazza, -Associate Professor, Monash University, Australia

Malek Bouazza, Ph.D is an Associate Professor in Civil Engineering at Monash University, a Geotechnical Engineering Specialist at Golder Associates, Melbourne and an Adjunct Research Professor at Cardiff University, U.K. He has an international reputation for research in Geosynthetics and Environmental Geotechnics. His research has been recognised by a number of awards including, the International Geosynthetics Society Award and Gold Medal for outstanding contribution to advances in the scientific and engineering developments of geosynthetics. Dr. Bouazza is very prominent in technical and professional society activities and serves on a number of international technical committees. Currently, he is a member of the International Geosynthetics Society (IGS) council and holds the chairs of both the Asian Activities Committee and the Technical Committee on Barrier Systems of the International Geosynthetics Society. His skills and experience in the area geosynthetics are well recognized in Australia and abroad.

Short Course / GCI Exam Cost/Tuition (see registration form) For registrations before Friday, October 16th, 2009

CQC/CQA Short Courses and CQA Exam (all prices shown in US Dollars)

Nov. 4-5, both courses, 1 registrant per company	\$650.00/person
Nov. 4-5, both courses, 2 + registrants per company	\$600.00/person
Nov. 4-5, both courses, both courses, government	\$200.00/person
One course (day) only, 1 registrant per company	\$350.00/person
One course (day) only, 2 + registrants per company	\$325.00/person
One course (day) only, government	\$125.00/person

GCI Exam

Nov. 06, TRI fee for one applicant only per company	\$50.00/person*
Nov. 06, TRI fee for 2+ applicants per company	\$35.00/person*

***The exam costs above DO NOT reflect the cost for sitting for the exam, only TRI's exam proctoring cost for offering the exam as part of the short course event. The GCI exam itself is part of the GCI CQA technician certification program. Thus, one MUST REGISTER with the Geosynthetic Institute (GSI) and pay their required certification fee in order to take this exam. TRI does NOT collect this fee as it must be paid directly to GSI (GSI phone: 01 610-522-8440).**

**CQA FOR GEOSYNTHETIC INSTALLATIONS
SHORT COURSE OUTLINE
Day 12 – Thursday, Nov. 04, 2010**

7:30-8:00am	Registration	
8:00-8:15	Welcome and Introductions	S. Allen
8:15-8:30	CQA Principles and Philosophy <i>(Responsibilities, appreciation of role, professional considerations and on-site protocol, conflict resolution, etc.)</i>	J. Allen
8:30-9:30	Background of Geosynthetics and Manufacturing <i>(Polymers to products, material properties, product manufacturing)</i>	S. Allen
9:30-10:30	HDPE & LLDPE & fPP Geomembranes & Seams <i>(Types and specifications, shipping/receiving, unloading, storage & installation)</i>	S. Allen
10:30-10:45	Break	
10:45-11:15 am	HDPE & LLDPE & fPP Geomembranes & Seams - Continued	S. Allen
11:15-12:15	Welding Demonstration/Seam Testing <i>(Double track fusion welds, extrusion welds, "T" welds, seam sampling, peel and shear testing, peel incursion and strain measurements, modes of failure, break codes, field vs. laboratory testing)</i>	Allen(s) & Installer
12:15-1:00	Lunch (provided)	
1:00-2:00	Special Guest Lecture: Dr. Malek Bouazza Landfill Failures and Lessons Learned	
2:00-2:30	Flexible Geomembranes & Seams <i>(Types and specifications, shipping/receiving, unloading, storage & installation)</i>	S. Allen
2:30-3:30	Geotextiles, Geonets/Geocomposites, Geogrids, Pipe, Erosion Control <i>(Types and specifications, shipping/receiving, unloading, storage & installation)</i>	S. Allen
3:30-3:45	Break	
3:45-4:30	Protection and Soil Cover	J. Allen
4:30-4:45	CQA Paperwork and Record Keeping <i>(Importance of documentation, communication records, examples of record keeping and documentation, checklists)</i>	J. Allen
4:45-5:00 pm	Discussion	
5:00-7:00 pm	Trade Show !!! w/Happy Hour / Snacks	

CQA FOR COMPACTED CLAY & GEOSYNTHETIC CLAY LINER INSTALLATIONS
SHORT COURSE OUTLINE – Dr. Robert (Bob) Gilbert
Day 2: Thursday, Nov. 05, 2010

8:00-8:30 am	Registration
8:30-9:00	Liner and Cover Systems <i>(single liners/double liners/composite liners, leakage rates through soil, composite action with geomembranes, importance of drainage layer properties)</i>
9:00-10:30	Compacted Clay <i>(materials, factors affecting hydraulic conductivity, clod vs. particle orientation theory, keys to low hydraulic conductivity, water content-density criteria, recommended procedures for determining acceptable zone, influence of overburden stress, bonding of lifts, thickness)</i>
10:30-10:45	break
10:45-12:00	Construction of Compacted Clay Liners and Covers <i>(equipment, preprocessing of soil, soil moisture control, sieving, clod control, crushing/pulverizing materials, compaction, test pads)</i>
Noon-1:00 pm	Lunch (provided)
1:00-2:00	CQA for Compacted Clay Liners and Covers <i>(CQA principles, CQA plan, tests, observations, field water content tests, field density tests, hydraulic conductivity compliance tests, frequency of tests, sampling pattern, outliers, corrective action, role of test pads, final certification)</i>
2:00-3:00	History of GCLs <i>(commercially-produced GCLs, geosynthetic materials, manufacturing of GCLs, manufacturing quality control, recommended specifications)</i>
3:00-3:15	break
3:15-4:00	Bentonite <i>(measures of and tests for bentonite quality, recommended specifications for bentonite in GCLs, contaminant-resistant bentonite)</i>
4:00-5:00	Installation of GCLs <i>(transportation, handling, storage, subgrade preparation, placement procedures, seaming protection, construction quality control and assurance, observations, types of tests, frequency of testing, field case history)</i>
5:00-5:30	Open discussion

Day 3 - Saturday, Nov. 06, 2010

**CERTIFICATION EXAM – To Be Held at Monash University
Construction Quality Assurance-Inspectors Certification Program**

9:00-9:15 am	Registration and Introduction
9:15-11:15 am	Geosynthetic Exam
11:15 - 11:40 am	Break (on your own)
11:40-12:40 am	Compacted Clay Liner Exam

INFORMATION regarding exams:

- 1) ALL students wishing to sit for the exam(s) **MUST FIRST register for certification through the Geosynthetics Certification Institute and pay the applicable fees directly to GSI** (phone: 610-522- 8440). GSI registration must be received by the GSI 7-10 days before the Nov. 06 exam(s).
- 2) Students are **REQUIRED** to bring a government-issued photo ID prior to entering the testing room. They must also supply the Proctor with a photocopy of the ID when turning in the test.
- 3) Time allowed:
Students will be given two hours to take the geosynthetic test. There are 140 questions and you must answer 70% of the questions correctly in order to pass. Please note that there is only one correct answer for each question.

You will be given one hour to take the compacted clay liner test; there are 30 questions and you must answer 70% of the questions correctly in order to pass. Please note that there is only one correct answer for each question.
- 4) The test is a multiple-choice test. The student must circle the correct answer (and only one answer) for each question. They must not select multiple answers for the same question.
- 5) **The exam will be given at Monash University which is approximately 30 km from the conference center. Detailed instructions will be provided upon registering for the exam.**

TRI REGISTRATION FORM

(use registration form below or register on-line at www.GeosyntheticTesting.com)

- Nov. 4-5, both courses, 1 registrant per company \$650.00/person
- Nov. 4-5, both courses, 2 + registrants per company \$600.00/person
- Nov. 4-5, both courses, both courses, government \$200.00/person

- One course (day) only, 1 registrant per company \$350.00/person
- One course (day) only, 2 + registrants per company \$325.00/person
- One course (day) only, government \$125.00/person

GCI Exam

- Nov. 06, TRI fee for one applicant only per company \$50.00/person*
- Nov. 06, TRI fee for 2+ applicants per company \$35.00/person*

*** These fees DO NOT pay for the exam, only the venue for taking the exam. The GCI exam is part of the GCI CQA technician certification. You MUST REGISTER with the Geosynthetic Institute (GSI) and pay the required certification fee directly to GSI in order to take this exam, (GSI phone: 610-522-8440)**

Registrations must be received by 5:00 pm CST, Friday, Oct. 01, 2010 - \$50.00 /person late fee thereafter. Fee includes course notes and handouts, designated breaks and lunches Nov. 04 and 05. \$50.00 cancellation fee for refunds requested before Oct. 01, 2010 -- no refund thereafter. Course notes are NOT sold separately.

Method of Payment: Payment may be made by check, money order, American Express, Visa or MasterCard.

- Check
- Money Order
- Purchase Order

Make check or purchase order payable to TRI/Environmental, Inc., and mail to TRI, 9063 Bee Caves Rd., Austin, Texas 78733.

Credit Card: American Express Visa MasterCard

Credit Card # _____ Expiration Date: _____

Please direct questions to Ms. Melissa Hunter or Mr. Sam Allen, phone: (512-263-2101, fax: (512) 263 2558.

PLEASE TYPE OR PRINT CAREFULLY

Name		
Position / Company		
Address		
phone / e-mail		
amount paid (\$'s)		
I have registered with GCI & paid the GCI certification fee. I will take the Geosynthetic CQA Exam Apr. 16, 2009 (check=>)		
I have registered with GCI & paid the GCI certification fee, and I will take the Compacted Clay Liner CQA Exam Apr. 16, 2009 (check=>)		

Return Registration and Payment via Mail or Fax to:

**TRI, ATTN: Chris Perez
 9063 Bee Caves Road
 Austin, Texas 78733
 Fax Number: (512) 263-2558**