



LISA Course



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



LINER INTEGRITY SURVEYS/ASSESSMENTS (LISA) Course
Thursday and Friday, March. 17 & 18, 2011
Immediately after Geo-Frontiers 2011!

Location

TRI/Environmental, Inc.
Bldg. A Facility
9063 Bee Cave Road, Austin, TX 78733, USA

About the Training Courses

LISA (2-Day) Training (March 17 & 18 2011)



Recent CQA technology development has encouraged the geosynthetics industry to re-think the historical paradigm of destructive seam testing (peel and shear). Part of the response to these considerations has been the encouragement and rapid development of non-destructive testing specifically Liner Integrity Surveys/Assessments (LISA).



LISA technologies can be utilized to swiftly and non-destructively detect small holes or leaks in geomembrane liner systems. A variety of eclectically based LISA surveying methods are available for leak detection. The selection of a method is a contingent upon specific the lining conditions. Each method combines a different application technology with the use of electrical current to detect holes/leaks in lining systems.

CQA firms adept with these technologies are creating new revenue centers for themselves while providing much needed services to their clients. LISA, as a service, naturally complements the existing services offered by most CQA firms practicing in the waste management construction industry.

A 3-part certification process has been specifically designed for those persons who have a desire to perform LISA. Graduates of this certification program will:

- understand the basis of electrical leak testing
- be able to select the most appropriate LISA Methodology under a variety of circumstances
- be able to perform each method of LISA
- be able to report on their LISA findings
- have on-going access to the resources of TRI and Dr. Ian Peggs as they begin to preform LISAs for their clients.

This course, offered by the **TRI-Corp Liner Integrity Center (TCLIC)**, is intended to assist those who are interested in adding LISA to their core business, or for those reviewing results of LISA for regulatory or client approval.

Why you should attend...

Electrical Resistivity Testing and Construction QA of geosynthetics can be smooth additions to your Engineering Consulting and Design Practice. 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 one-week dedicated CQA training program provides a wonderful opportunity for professional growth and business development.

Where to stay for the courses...

Holiday Inn Express Hotel & Suites, Austin-Sunset Valley, 4892 US Highway 290 West, Austin, TX 78733, 1 800 315 2621, 10 miles from airport, 9.9 miles from short course, NO shuttle service
Extended StayAmerica Austin – Southwest, 5100 US Hwy. 290 W., Austin, TX 78735, Telephone: 512-892-4272, 15.7 miles from airport, 9.54 miles from short course, NO shuttle service

About TRI...

TRI/Environmental, Inc. (TRI) has been active in geosynthetics testing, inspection and research and development for over eighteen years. 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

Special Instructor: Dr. Ian Peggs, P.E.

Dr. Peggs, a materials scientist, has been involved with the testing of plastics, geomembranes, seams, and lining systems for over 25 years. He has been performing and developing liner integrity and leak location surveys since 1987. Dr. Peggs has performed water-covered and exposed liner surveys on liners up to 6,350,000 ft² in area, waste-covered liners up to 15 ft deep, complex concrete basin liners, and GCL-only liners. In addition to applied potential methods, he is involved with acoustic, streaming potential, and IR spectroscopy methods for locating leaks in bottom liners and caps. He is also experienced with the use of other nondestructive detection technologies including IR thermography and ultrasonic methods used to locate leaks and internal flaws in seams and welds. As a geosynthetic materials performance consultant he has clients in over 30 countries.

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 Chairman of Committee D35 on Geosynthetics within ASTM. Sam also serves on the Technical Advisory Board of Geotechnical Fabrics Report, 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.

Short Course / GCI Exam Cost/Tuition (see registration form) For registrations before Friday, February 25th, 2011

Liner Integrity Survey Short Course

March 17 & 18 1 registrant per company	\$1250.00/person
March 17 & 18, 2 registrants per company	\$1150.00/person
March 17 & 18, 3 + registrants per company	\$995.00/person

LISA - SHORT COURSE OUTLINE

Days 1 and 2 – Thursday & Friday 17 & 18 March 2011

PART 1: Classroom – Thursday, March 17, 2011

8:30-8:45 am	Welcome
8:45-9:00	LIS Accreditation System
9:00-9:30	Why Liner Integrity Surveys? Introduction and LIS History and Statistics
9:30-10:30	Theory, Boundary Conditions
10:30-10:45	Break
10:45-11:30	Designing Facilities for LIS
11:30-12:15	LUNCH
12:15-1:15	Field Procedures - for pond, soil, uncovered, in-situ; ASTM procedure review; Calibration
1:15-1:45	Technology Limitations; Examples
1:45-2:30	Case Histories / Questions / Answers
2:30-3:00	Field Coordination
3:00-5:00	Field Demonstrations (water-covered, soil-covered and exposed liner test installations)
5:00-5:30	Refreshments/Questions/Answers (in classroom)
5:30-6:30 pm	Tour of TRI's Accredited Geosynthetics Testing Laboratory
6:30-9:00 pm	<i>Tex-Mex Bash</i>

PART 2: Field Training – Friday, March 18, 2011

8:30-9:00 am	Classroom review and planning
9:00-12:00 pm	HANDS-ON GROUP FIELD TRAINING
12:00-1:00 pm	LUNCH
1:00-4:30 pm	HANDS-ON GROUP FIELD TRAINING (continued)
4:30-5:00 pm	Closing CLASS Session (Questions/Answers)

TRI REGISTRATION FORM

LISA – Electrical Resistivity testing Course Registration Fees:

- | | |
|---|------------------|
| <input type="checkbox"/> March 17 & 18, 1 registrant per company | \$1250.00/person |
| <input type="checkbox"/> March 17 & 18, 2 registrants per company | \$1150.00/person |
| <input type="checkbox"/> March 17 & 18, 3 + registrants per company | \$ 995.00/person |

Registrations must be received by **5:00 pm CST, Friday, February 25th** - \$50.00 /person late fee thereafter. Fee includes: course notes and handouts, designated dinners the evenings of March 17 & 18, and lunch and AM & PM breaks each day. \$50.00 cancellation fee for refunds requested before February 25th -- 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.,

Credit Card: American Express Visa MasterCard

Credit Card #: Expiration Date:

Please direct questions to Ms. Melissa Hunter or Mr. Sam Allen, phone: (800) 880-8378, fax: (512) 263 2558.

PLEASE TYPE OR PRINT CAREFULLY

Name			
Title		Company Name	
Address			
phone		e-mail	
amount paid (\$'s)			

Return Registration & Payment via Mail or Fax to:

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