MINING IS ONE OF THE CONFERENCE’S CORNERSTONE TOPICS

Geogrids efficiently improve the integrity of unpaved access roads to prevent costly failures under heavy loads and in poor weather. Geomembranes increase the yield and flow from heap leach pads and liquor trenches. Geotextiles, geocomposite drainage materials, geosynthetic clay liners, and other geosynthetics perform vital functions, enhance drainage and venting, improve the stability of berms around tailings, etc.

Attendees of GeoAmericas will learn why soil reinforcement is more important than ever to the success of mining and how geosynthetic liners and covers have dramatically and beneficially changed the economics and performance of heap leaching for gold, copper, uranium, and other materials. With multiple courses and sessions to draw upon, GeoAmericas gives participants ready-to-use strategies and access to geosynthetic designers, suppliers, and installers from throughout the Americas.

HIGHLIGHTS FOR MINING PROFESSIONALS INCLUDE:

- A full-day short course on “Advances in Geosynthetics for Heap Leaching,” taught by mine designer and owner Mark Smith, M.Sc., P.E., D.GE (RRD International); Denys Parra, M.Sc., P.E. (Anddes Associados), and Abigail Beck, M.Sc., P.E. (TRI Environmental). This full day course will provide attendees with design insights that will allow them to effectively understand and incorporate important new technologies in their projects.

<table>
<thead>
<tr>
<th>Leak Rate g/ac./day</th>
<th>Mineral Concentration/Yr.</th>
<th>10-Yr Loss on 50 Acres</th>
<th>10-Yr Loss on 100 Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>550</td>
<td>36.6 t oz.</td>
<td>$23,790,000</td>
<td>$47,580,000</td>
</tr>
<tr>
<td>250</td>
<td>16.6 t oz.</td>
<td>$10,790,000</td>
<td>$21,580,000</td>
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<tr>
<td>32</td>
<td>2.1 t oz.</td>
<td>$1,365,000</td>
<td>$2,730,000</td>
</tr>
</tbody>
</table>

*Assumes:
- Gold concentration of 1.5 ppm in pregnant leach solution
- Gold: $1,300 USD/t oz.
- data from CQASolutions.co

WHAT IS THE REAL COST OF A LEAKING MEMBRANE?

Geosynthetic materials are essential to the economical and environmental performance of mining operations. Geosynthetic technologies can be used to enhance infrastructure and improve processes. They provide more productive and robust facilities with higher yields.

MINING ENGINEERING AT GEOAMERICAS 2016

The 3rd Pan-American Conference on Geosynthetics (GeoAmericas 2016) will be held 10 – 13 April 2016 in Miami at the Loews Miami Beach Hotel. This quadrennial regional conference from the International Geosynthetics Society (IGS) features 3.5 days of high-quality geotechnical and civil engineering short courses, technical sessions, panel discussions, training lectures, keynote addresses, and networking in the international exhibit hall.
Learn from leaders and develop marketable skills in Short Courses like

ADVANCES IN GEOSYNTHETICS FOR HEAP LEACHING
– A DESIGN COURSE


The mining industry is one of the world’s biggest single users of geosynthetics, with as much as 40% of all geomembranes produced being utilized in mining operations. Heap leaching is the biggest driver of this usage. Just in the past 15 years, heap leaching has extended to chalcopyrite copper, uranium, and rare earths. Raincoat covers are being used. New geomembrane formulations are increasing heap leach yield. Previously thought “impossible” heap leach designs are achieved every couple years.

Geosynthetics are enabling this rapid growth in heap leaching, but mining engineers must better understand how and why geosynthetics and their various types succeed or are not appropriate for site-specific situations in mining.

Smith, Parra, and Beck will deliver a high-level course focused on:

- **Geotechnical behavior** (e.g., soil-geomembrane interface, seismic induced deformation, performance with high loads, steep slopes, valley fills)
- **Special considerations** (e.g., bioleaching and nickel, high operating temperatures, cold weather leaching, evaporative covers, cost benchmarking for leach pads)
- **Performance monitoring of heaps** (e.g., geotechnical instrumentation, design vs. as-built, operational issues, variability in geosynthetic quality)
- **Quality of installed facilities** (e.g., electrical leak location surveys, zero-leakage designs, construction quality control, cost/benefit analysis)
- **Risk management and project de-risking** (e.g., avoiding the “silo” effect, drained shell concept, coupling geomechanics, hydrogeology, and geochemistry)

**Nota:** este curso será dictado en Inglés, sin embargo, los instructores podrán responder las preguntas en Español y Portugués durante las discusiones con la audiencia.

**Attendees Must Pre-Register for short courses.**

ADVANCES IN GEOSYNTHETICS FOR HEAP LEACHING – A DESIGN COURSE

Sunday 10 April | 8:30 am – 5:30 pm

$500 | Limited Space

[REGISTER HERE](https://www.eiseverywhere.com/ereg/index.php?eventid=122547&)

Sign up for the GeoAmericas Newsletter at: www.GeoAmericas2016.org