## Cap costs & Leachate Generation

<table>
<thead>
<tr>
<th>Landfill</th>
<th>Cap cost $/ha</th>
<th>Leachate Gen Liters/ha/day</th>
<th>Leachate Gen Liters/ha/day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sandtown Cells A&amp;B</td>
<td>67,800</td>
<td>3,426</td>
<td>3,775</td>
</tr>
<tr>
<td>Sandtown Cell C</td>
<td>192,100</td>
<td>3,710</td>
<td>1,318</td>
</tr>
<tr>
<td>Sandtown Cell D</td>
<td>175,700</td>
<td>4,081</td>
<td>893</td>
</tr>
</tbody>
</table>
Current trends in leachate recirculation in Delaware

- Our new landfill cells use horizontal pipes to introduce leachate into the solid waste mass.
- The most promising method appears to be the “Horizontal Injection Trenches” or HIT’s.
- The volume of leachate required to saturate the solid waste can be estimated using the build up of pressure as a guide.
- The trench is allowed to rest and later the same pipe can be used to extract LFG.
We are attempting to add to our already large data base with specific measurements of LFG production from various cells. This may help in improving our understanding of the behavior of landfill cells over a period of time.

One must be patient in this respect and persistent in data collection.
What should USEPA do to help improve landfills?

- Modify landfill cap requirements to allow more experimentation.
- For landfill cells with double liners, phyto caps should be allowed.
- Establish uniform criteria for collection of leachate and LFG data from all landfills in the nation.
What else can USEPA do to help reduce emissions of LFG?

- Expedite Title V permit issuance. It is taking too long!
- Actively support research to develop criteria for determining the end of the closure period of landfills.
- Actively support upgrading the training programs for landfill operators.