

# Geotech Certificate of Cleanliness

## Polyethylene Bailers and Tubing

### Objective

1. To establish, secure and where possible improve the discharge of toxicologically relevant substances by various materials that make contact with groundwater samples.
2. To use inspections and information transfer to provide the client with more certainty about the contamination risk.
3. To provide the purchasing department with an additional selection criterion for evaluating suppliers.

### General

1. The product is subjected quarterly to strict, selective leaching procedure for establishing the degree of discharge of toxicological substances to water. Usually, at least 5 subsamples are taken for each product from stock. The resulting mix sample is then leached in a synthetic precipitation leaching procedure per method M1312 (modified) using ultra-pure water of pH=4. The products are not cleaned or flushed before the tests. The leaching bottles and their plugs are made of borosilicate glass. Air bubbles are excluded; this prevents the loss of volatile substances during the leaching test. Next, the analysis results are tested against the limit values formulated for the purpose and listed in the report available from Geotech Environmental Equipment, Inc.

### Parameters analyzed

The product is analyzed for:

- † Arsenic, cadmium, barium and heavy metals (chromium, copper, mercury, lead, nickel, zinc, and tin)
- † Extractable organic halogen compounds (EOX)
- † Phenol coefficient
- † Volatile aromatics (benzene, toluene, ethyl benzene, and xylenes)
- † Volatile halogenated hydrocarbons
- † Volatile and non-volatile chlorinated benzenes
- † Mineral oil
- † PAH by method 8310
- † Phtalates

### Laboratory

Leaching tests and analysis of these samples were carried out by the accredited laboratory ACZ Laboratories Incorporated in Steamboat Springs, Colorado. The test results for the methods and parameters meet all requirements of NELAC (National Environmental Laboratory Accreditation Conference).

### Substances Detected

Leaching tests and analysis of samples were performed 07.20.2010 (July 20, 2010; Batch No. L-83375). The original analysis list is available from Geotech upon request.

<u>Parameter</u>	<u>Result</u>	<u>MDL</u>	<u>PQL</u>
Barium	0.005mg/L*	0.003	0.02
Lead	0.0010mg/L*	0.0005	0.003
Acetone	20ug/L*	10	30

\*Analyte concentration detected at a value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL), associated value is an estimate.

Geotech Environmental Equipment declares that this product has been analyzed in accordance with the certificate and satisfies the high quality requirements.

### Remark

All synthetics absorb volatile substances. During storage or transport, product (packed or un-packed) must be stored in clean, air ventilated rooms. Gasoline powered equipment should be stored separately in an air-tight metal box, with de-aeration installation with active carbon filter and/or powered by Aspen aromatic free fuel. If not stored properly, volatile substances absorbed in product can be released in detectable values during sampling. Properly stored product will release no detectable substances during purging of a monitoring well.