

Request for Environmental and IH Laboratory Analytical Services

ATTENTION TO:							Purchase Order No.:			Client Job No.: Rock Hill Quarry																																																																																																															
Lab Use Only	Project No.:		Client No.:				Date Results Needed	Std. TAT			Rush Charges Authorized? (check one)		<input type="checkbox"/> YES																																																																																																												
	Date Logged In:		Logged In By:								<input checked="" type="checkbox"/> NO																																																																																																														
Report Results To	Name: Andrew Gutshall						Drinking Water Sample Only	Sample Purpose: Information <input type="checkbox"/> Regulatory <input type="checkbox"/> Accreditation (please list below):																																																																																																																	
	Company: Hanson Aggregates Pa, LLC							System ID #: N/A		N/A																																																																																																															
	Address: 7660 Imperial Way							DOH Source #: N/A																																																																																																																	
	City, State, Zip: Allentown, PA 18195							Multiple Sources #s: N/A																																																																																																																	
	Phone: 610-366-4819 Fax:							Sample Purpose: A <input type="checkbox"/> B <input type="checkbox"/> Other <input type="checkbox"/> N/A																																																																																																																	
Email Results To: Andrew.Gutshall@LehighHanson.com						Chemistry Analysis Key	Preservation: Unpres H ₂ SO ₄ 4°C HCl HNO ₃ NaOH Other Na ₂ SO ₄		Matrix: WW=Wastewater GW=Groundwater S=Soil/Sludge E=Extract		SW=Surface Water DW=Drinking Water O=Oil X=Other		Container: P=Plastic G=Glass W=Wipe A=Air (filter or tube)																																																																																																												
Name: _____ If a hard copy of invoice is needed, check here <input type="checkbox"/>							<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">NOA Per EPA Method 100.2</th> <th colspan="5">Analysis Requested</th> <th rowspan="2">Pres. Upon Receipt (Y/N)</th> <th rowspan="2">Preservation</th> <th rowspan="2">Matrix</th> <th rowspan="2">Container Type</th> <th rowspan="2">pH</th> <th rowspan="2">No. Containers</th> </tr> <tr> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>6</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>7</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>							NOA Per EPA Method 100.2	Analysis Requested					Pres. Upon Receipt (Y/N)	Preservation	Matrix	Container Type	pH	No. Containers						1													2													3													4													5													6													7												
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Client Sample ID		Sample Description		Sample Date		Sample Time		Wipe Area / Air Volume		Sample Location (Please specify if NY state)		NOA Per EPA Method 100.2		Pres. Upon Receipt (Y/N)		Preservation		Matrix		Container Type		pH		No. Containers																																																																																																	
1		NPDES Outfall		4/18		9:41 Grab		N/A		N/A		✓				Ice SW		P		7.0		1																																																																																																			
2		Sed. Trap 2		4/18		9:55 Grab		N/A		N/A		✓				Ice SW		P		7.2		1																																																																																																			
3		Sed. Basin 2		4/18		10:12 Grab		N/A		N/A		✓				Ice SW		P		7.7		1																																																																																																			
4		Sed. Basin 1		4/18		10:25 Grab		N/A		N/A		✓				Ice SW		P		7.8		1																																																																																																			
5		Quarry Pit		4/18		10:50 Grab		N/A		N/A		✓				Ice SW		P		8.0		1																																																																																																			
6		Sed. Trap 1		4/18		11:05 Grab		N/A		N/A		✓				Ice SW		P		8.2		1																																																																																																			
7		Sed. Trap 3		4/18		11:15 Grab		N/A		N/A		✓				Ice SW		P		8.0		1																																																																																																			

Attachment 1

Sample Analysis Procedures and Methods

For obtaining a representative sample from a large bulk sample, the AASHTO procedures for reducing the sample should be used. The subsequent analyses of the submitted samples will follow a three step procedure: 1) Basic microscopic analysis to assess the presence of asbestiform mineral habitat; 2) Polarized Light Microscopy (PLM) to determine the presence and asbestos mineral type, if present; and, 3) Should positive results be indicated by PLM, follow-up Transmission Electron Microscopy (TEM) analysis will be completed to confirm the minerals present and their morphology. The techniques and methods to be employed in sample analysis are provided below:

- A geologist will inspect hand and core samples initially using a stereo binocular microscope, with magnification ranging from 10x to 60x. Using a fine steel pick (dental pick) the geologist will scrape the surface of the suspect mineralization to determine if any of the minerals display typical asbestiform habit and characteristics such as fiber bundles, splayed ends, or matted or fibrous masses.
- Further examination of the sample will then be conducted using the Polarized Light Microscope (PLM) using EPA 600/R-93/116.
- If asbestiform minerals are found, representative samples will be further analyzed by Transmission Electron Microscopy per EPA 600/R-93/116 to confirm mineral identification and morphology.
- Where appropriate, the microscopic PLM and/or TEM analyses will include a count of the asbestiform fibers, representative digital images, and measurements of the width and length dimensions of found fibers counted.

Water samples will be collected as grab samples and will be analyzed by TEM per EPA 100.2.

The samples will be analyzed using the above procedures by RJ Lee Group, which is accredited by the American Industrial Hygiene Association and is in the NIST National Voluntary Laboratory Accreditation Program for asbestos analysis. RJ Lee Group has mineralogical expertise and has vast experience to detect asbestos fibers in the natural environment (e.g. rocks, soils, water, etc.).