

GRAVEL PIT OPERATIONS AND EXPLORATION ERIONITE SAMPLING CHECKLIST

A company or individual planning to conduct erionite sampling must develop a sampling plan using the North Dakota Department of Health (NDDoH) *Erionite Sampling Guidelines*. This plan must be submitted to the NDDoH for review <u>prior to sampling</u>. Within two weeks, the NDDoH will return the sampling plan with any revisions. After incorporating the revisions, the sampler should collect samples and submit them to the laboratory selected.

Within two weeks of receiving the laboratory test results, the sampler should send the results, along with a copy of the sampling plan (complete with sample log), to the NDDoH. The NDDoH will provide written approval or denial to the sampler within two weeks. (Contractors providing gravel for roadways must provide NDDoH written approval to the North Dakota Department of Transportation two weeks prior to starting to mine or process material.)

Filling out the following checklist can help a sampler develop and implement a sampling plan. This checklist is not to be used as a substitute for the actual sampling plan. Each of the following items should be fully described in the sampling plan.

1. Compa	my (i.e., owner/operator of site)
Name:	
Address: _	
City/State:	
Phone:	
Email:	

1. Company (i.e., owner/operator of site)

2. Project

Location:

Type: Existing gravel source

Exploration for gravel source

Other (Please describe.)

3. Sampling Site Locations

Attach a diagram showing sampling sites, including the borders of sampling areas. If a site contains stockpiles of material, include them on the diagram.

Diagram attached. Sampling locations with GPS coordinates.

4. Sampling Apparatus

List equipment and materials used to collect and process samples (e.g., Geoprobe, auger, shovel, sieves, decontamination materials, etc.)

5. Personnel

Are adequately qualified for sampling.

Are aware of safety issues associated with sampling (including PPE and training records) in accordance with OSHA and MSHA regulations.

Understand methods of choosing sampling locations and randomly collecting grab samples.

Are aware of the minimum number of composite samples to be collected

Are trained to use the equipment/tools to sample and measure depths from grade.

Are trained to use cleaning/decontamination methods between sampling.

Are able to complete sample logs and chain of custody forms.

Know the analytical lab that has been selected. List name of lab:

Know the minimum representative composite samples needed for this area.

Are aware if landowner requests a sample.

6. Sampling Log Provide:

A rough sketch, videotape or photograph of the specific sampling locations. Include the depths below grade from which each sample was taken (before adding to the composite sample).

A copy of the completed chain of custody for samples (when sampling is complete).

Name and contact information of person performing sampling.

Include on label:

A unique number for each composite sample.

Facility name.

Location where sample was taken (GPS coordinates)

Method, date and time of sampling.

7. Analytical Procedures

For bulk sample analysis, a combination of SEM and EDS or XRD will give an elemental composition required for identification of the mineral erionite. PCM, PLM or TEM on bulk sample analysis should not be used because they are not as reliable at discriminating among erionite, asbestos, non-erionite fibers and non-mineral fibers.

Contacted lab in advance to determine fees and schedules.

Confirmed that lab has the correct erionite reference sample.

Confirmed lab understands all hazards associated with handling/analyzing erionite samples.

Confirmed shipping information and procedures with lab

For more information about erionite, please contact the North Dakota Department of Health, Division of Waste Management, at 701.328.5166.