

August 10, 2021

*Via Email and First-Class Mail*

Mr. Richard Tallman, P.E.  
Pottsville District Mining Office  
Pennsylvania Department of Environmental Protection  
5 West Laurel Boulevard  
Pottsville, PA 17901

**Re: Rock Hill Quarry  
Erskine of Erskine Environmental Consulting, Inc. comments  
Technical Deficiencies for the Rockhill Quarry.**

Dear Mr. Tallman:

On behalf of Rockhill Environmental Preservation Alliance, Inc. (REPA), attached please find comments from Dr. Bradley Erskine of Erskine Environmental Consulting, Inc. (EEC) to Hanson Aggregates' July 6, 2021 response to the Department's April 12, 2021 technical deficiency letter, and to the attachments accompanying Hanson Aggregate's July 6 letter.

Thank you for your attention to this matter.

Very truly yours,



Mark L. Freed, Esquire  
For CURTIN & HEEFNER LLP

Enclosure

cc: The Honorable Thomas Wolf, Governor of Pennsylvania  
The Honorable Patrick McDonnell, Secretary, PA-DEP  
The Honorable Brian Fitzpatrick, U.S. Representative PA-01  
The Honorable Steven Santarsiero, 10th Senatorial District  
The Honorable Craig Staats, PA's 145th Legislative District  
The Honorable Diane Ellis-Marseglia, Chair, Bucks County Board of Commissioners  
The Honorable Robert Harvie, Jr., Vice Chair, Bucks County Board of Commissioners  
The Honorable Gene DiGirolamo, Bucks County Board of Commissioners

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Megan Banis-Clemens, Pennridge School District, School Board Member

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REPA

# ***Erskine Environmental Consulting***

*Geologic Investigations Hazardous Materials Naturally Occurring Asbestos*

## **Technical Memorandum**

August 3, 2021

**Subject:** Comments on Hanson's response to DEP's deficiency letter

Erskine Environmental Consulting, Inc. (EEC) reviewed the following documents that were submitted by Hanson in response to DEP's technical deficiency letter dated 4/12/21:

1. Mineral Identification and Management Guide for the Rock Hill Quarry
2. Asbestos Monitoring and Mitigation Plan
3. Preliminary Sampling Results, Preliminary Sampling Results Collected from Perimeter Air, Water, and Overburden Locations at the Rock Hill Quarry
4. Response to PADEP April 12, 2021 Technical Deficiency Letter

Each review is presented in four parts as listed above. Comments are restricted to subjects that are related to issues that are directly related to asbestos sampling, testing, monitoring, and general health and safety related to potential adverse exposure to the Rockhill community by disturbance of naturally occurring asbestos (NOA) at the Rockhill quarry site.

Many of Hanson's responses are duplicative where their response was considered appropriate to address different or similar questions within the deficiency letter. To prevent duplicity and redundancy herein, EEC commented only once on a particular subject, and it should be understood that the comment may be applied to other areas where it appropriately addresses Hanson's responses elsewhere in the document.

It is important to read, and analyze, each of EEC's comments and technical arguments that address each of Hanson's responses to DEP's questions. It is equally important to step back and view the body of the information in the context of the entire asbestos program that has been, or will be, implemented by Hanson with support by their consulting laboratory, RJLG. Viewing the program in its entirety uncovers a path that, if chosen, produces a significant error by selectively and systematically removing fibers from the count, resulting in a significant under-reporting or elimination of asbestos in rock and air samples. Subsequently, this practice can eliminate a requirement to communicate the asbestos content in the material, its potential hazards, and regulatory requirements during its use by others.

Consider the following scenario that may realistically occur based on previous submittals and Hanson's submittals, responses and plans:

## **Step 1: Sampling Protocol**

When conducting a geological investigation to quantify the concentration of asbestos in the rocks and soil, the geologist will prepare and implement a custom site-specific plan in accordance with the Standard of Practice required of a licensed professional. The geologist will review test results, and provide an unbiased interpretation of the results and present recommendations within the context of the project goals.

At the Hanson quarry site, however, the geologist is provided a version of the NSSGA Mineral Identification and Management Guide (August, 2009) that provides a qualitative approach, requires the use of the industry's definition of target minerals "protocol fibers", and the industry's field criteria for assessing whether a material should be sampled or not, based on the industry's definition of "suspect material". This protocol as a whole produces a bias that, through its design, will result in an avoidance of sampling for asbestos rather than characterizing the materials for the purpose of characterizing the rock units for asbestos. For example, the geologist is instructed to sample rocks only when "protocol" fibers are observed in the field. Because the asbestos within the diabase is comprised of fibers that are too small to be observed, the material will be designated as non-suspect material and not sampled.

## **Step 2: Analysis by Polarized Light Microscopy**

Samples that survive the field screening process and analyzed by Polarized Light Microscopy (PLM) are subjected to another screening process that reduces, or eliminates, asbestos from reporting. In Hanson's Attachment A, RJLG separates fibers into asbestos vs. non-asbestos, but provides no basis in an SOP or otherwise to make this distinction. The "We know asbestiform when we see it" method has no place in asbestos testing where test protocols specify the counting procedures. Positive identification of asbestos fibers cannot be refuted based on an opinion.

Photographs presented in Hanson's Appendix A appear to refute RJLG's own argument. By what criterion did RJLG deem the particle in Figure 1 (bottom) different than the particle in Figure 2 (top)? Also, the selection of the photographs appears biased. Of all of the "cleavage fragments" that could be photographed, two very short particles were selected, and one (Figure 2, bottom) does not even meet the definition of a fiber because its aspect ratio is less than 3:1.

The segregation of fibers by morphology is also contrary to Hanson's and RJLG's own criteria, who cites the definitions in EPA/600/R-93/116 as their basis. This method states: "These characteristics refer to the population of fibers as observed in a bulk sample) (underline not added by EEC). Only one test method references a "population" (EPA 100.1), which states that the calculation of the index of fibrosity requires at least 50 particles in the sample. However, the maximum number of particles point counted within the eight samples is two (each fiber = 0.1%), and the total number of fibers collectively is five. This is hardly a "population" by any metric, and therefore, RJLG eliminates fibers on a particle-by-particle basis. An opinion cannot refute the finding that a particle is asbestos as per the test methodologies.

### **Step 3: Analysis by Transmission Electron Microscopy (TEM)**

Any sample that survives the PLM elimination process is further analyzed by TEM. RJLG appears to further eliminate particles using this method for bulk, air, and water samples. Consider the photographs in Figure 4 and compare them to the photographs in Figure 3. All of these fibers exhibit the classic shapes and size found in TEM bulk and air samples of commercially mined asbestos that was applied in building materials, and would be counted as asbestos by virtually all NVLAP accredited laboratories. By RJLG's own criteria, both fibers in Figure 4 exhibit the properties of asbestos bundles, as indicated by the protrusion of fibrils or smaller bundles at the tips. There are no criteria in any test method that would allow these to be counted as non-asbestos. Thus, particles that are counted by various TEM test methods (bulk, air and water) are eliminated based on unrecognized test criteria and undisclosed criteria that has not been submitted for review.

### **Step 4: Communication of Findings**

Hanson stated that they will communicate hazards only to the degree required by law, and cited the 1% threshold as per OSHA and MSHA regulations (note that the 0.1% threshold cited for OSHA is not correct). Therefore, no labeling of the processed material as asbestos-containing will be conducted, and no communication of a potential hazard will occur outside of a "safety sheet" where Hanson provided no specifics. Again, Hanson is applying requirements under the worker standard to public situations. Contractors will not be informed that the OSHA standard will be triggered as soon as the purchased material is used; the community will be unaware of asbestos projects nearby; and land owners where the material will be used will be unaware of the potential liability associated with acceptance of potentially hazardous material.

### **Step 5: Air Monitoring**

Hanson proposed several criteria for asbestos counting (such as only fibers  $\geq 5\mu\text{m}$  as per the OSHA and MSHA worker protection standard), and proposed a reduction or elimination of air monitoring in the future if perimeter levels are routinely below an arbitrary threshold of 0.01 f/cc, which is not risk-based and derived from the worker standards. Hanson apparently believes that this standard will be achievable once the procedures that reduce the reporting of asbestos, discussed above and in the reviews, below) are implemented. Hanson further believes, as stated in their air monitoring plan, that future testing may find the diabase to be a non-NOA unit, and therefore, no asbestos-related dust suppression protocols or air monitoring will be required.

### **Conclusion**

As supported by EEC's review of the four submittals and previous submittals, DEP does not have an unbiased test data set that adequately characterizes the site for asbestos in bulk, air and water samples. In addition, the Asbestos Monitoring and Mitigation Plan design is based on worker protection regulations rather than community health and safety. Most importantly, the sampling, testing, and air monitoring protocols effectively reduce, or remove, the reporting of asbestos, and do not adequately protect, or verify protection, of the nearby community. EEC recommends that DEP conduct their own sampling and analysis program rather than rely on data produced by, and monitoring programs designed and implemented by, the quarry operator who has a significant financial interest in the reporting of asbestos. A third-party consultant should design

the monitoring program, including frequency of sampling, and specify the test methodology and risk-based thresholds. DEP should also contract with a third-party laboratory that does not have significant ties to the mining industry.

Comments and conclusions presented in this review are fact-based and represent the opinion of EEC. EEC welcomes comment by Hanson or RJLG on any or all findings, including all previous memoranda. As part of the SGI Charmian quarry project, DEP requested on September 30, 2019 that Specialty Granules LLC comment on several early EEC memoranda prepared by EEC, and RJLG responded on their behalf on December 9, 2019. The review included misrepresentations and statements that can be proven to be incorrect. EEC requests that it be included on any communications with Hanson or RJLG regarding EEC's opinions, and afford EEC the opportunity to rebut any mischaracterization or misinterpretation.

Please contact me if you have any questions.



Bradley G. Erskine, Ph.D., PG, CEG, CHG, CAC  
Erskine Environmental Consulting

**Part 1**

**Comments and Observations**

**Mineral Identification and Management Guide for the Rock Hill Quarry**

**Section A: Purpose**

Paragraph 1 states:

*"This Mineral Identification and Management Guide (hereinafter "Guide") memorializes protocols and procedures implemented by Hanson Aggregates PA, LLC (Hanson) to assess whether "protocol minerals" as defined below are present on a quarry site and to minimize the processing of such materials in a manner that may release undesirable mineral fibers".*

Hanson created a class of minerals called "Protocol Minerals" that is applied by the mining industry and memorialized in the NSSGA "guide". It is a term, as applied, is unique to the mining industry, and not based on the reporting of asbestos as defined by various test methods (discussed below). In particular, the purpose states that the goal is to minimize release of "undesirable mineral fibers". An undesirable fiber as viewed by the mining industry may be very different than an undesirable fiber as viewed by regulatory agencies, health and safety experts, and the communities that may be exposed to these fibers. It seems reasonable that the purpose should be prevention of asbestos emissions that might result in an adverse health risk to workers and the public. The language suggests that the Guide appears designed to protect the mining industries interests and not necessarily the protection of workers and the public.

Paragraph 2 states:

*"Materials suspected of containing protocol minerals are referred to as "suspect material."*

As will be shown below, the assignment of the term "suspect material" is determined in the field by observational techniques, and rocks where asbestos is too fine to be identified visually, such as the Rockhill diabase, is precluded from further analysis.

Paragraph 2 states:

*"This document is solely a guide..." "The procedures established in this guide may be varied in light of operational demands or restrictions".*

This "Guide" appears to be a highly biased screening process rather than a protocol for a comprehensive investigation. It provides language ("operational demands or restrictions") where the screening or investigation can be modified where results that are averse to mining interests may be contrary to operational demands.

It should also be pointed out that the geologic survey is a "qualitative" survey, and not a robust investigation designed to accurately quantify asbestos concentrations in accordance with normal geologic and laboratory standards of practice.

## Section C: Protocol Mineral Fibers

### Subsection 1: Asbestos PMF's

The Guide states:

*"The minerals are (a) classified as "asbestos" only when they formed in nature with the asbestiform mineral habit; and (b) not classified as "asbestos" when they formed in nature with the nonasbestiform mineral habit".*

This subject has been discussed extensively by prior EEC memorandum. There are no test methods that can distinguish minerals that originally crystallized in the asbestiform habit from those that have not. NIOSH has clearly stated this in writing. EPA and USGS has rebuked RJLG's arguments that the two morphological groups should be separately categorized with one eliminated from reporting.

Hanson and RJLG has asserted that the non-asbestiform analogues of amphibole fibers do not carry the toxicity of the asbestiform analogues. NIOSH has stated, in writing, that research has not shown the non-asbestiform analogues to possess a lower toxicity than the asbestiform analogues (discussed below). This previously has been recognized by RJLG during public comment regarding a proposed new test method for asbestos in talc. See page 4 of their powerpoint presentation (yellow highlighting was not added by EEC) found at: <https://www.fda.gov/media/135056/download>

Hanson, and by association, RJLG, defines "Asbestiform" following a description within *National Institute of Standards and Technology (NIST), Certificate of Analysis, Standard Reference Material® 1867a, Uncommon Commercial Asbestos*; (b) EPA, 1993 (this document was cited in the "Guide"). It states:

*"Asbestiform: "crystallizes with the habit of asbestos. These asbestos minerals possess properties such as long fiber length and high tensile strength. Under the light microscope, some portion of these samples exhibit the asbestiform habit as defined by several of the following characteristics: 1) mean aspect ratios ranging from 20:1 to 100:1 or higher for fibers longer than 5 µm, 2) very thin fibrils, usually less than 0.5 µm in width, 3) parallel fibers occurring in bundles, 4) fiber bundles displaying splayed ends, 5) fibers in the form of thin needles, 6) matted masses of individual fibers, and 7) fibers showing curvature".*

Two key words in the actual text, are significant: "Under the light microscope, **some portion** of these samples exhibit the asbestiform habit...". Even in this reference material that was collected from ore-grade commercial asbestos and specifically used for asbestos in building materials, NIST clearly pointed out that this is not a rigid definition, rather, it is a general description of the reference material.

Hanson/RJLG also cites (as they have throughout the project) the definition provided in: EPA, 1993. *"Method for the Determination of Asbestos in Bulk Building Materials"* (EPA/600/R-93/116). The definition within this test method states:



*"These characteristics refer to the population of fibers as observed in a bulk sample" (underlined emphasis is in the original document and not added by EEC).*

Hanson/RJLG also subscribes to a definition of asbestos that was excerpted from the EPA test method and other regulatory documents, including high aspect ratios, fiber curvature, and splayed ends, which if applied on a fiber-by-fiber basis, will eliminate most or all actinolite fibers at the Rockhill site. In Hanson's letter to DEP dated October 3, 2019, they state: "*Failure to adhere to this EPA definition and its required characteristics leads to errors that can be illustrated by examining data produced by EMSL*". The actual "definition" comes from a description in the Glossary of Terms as follows:

Asbestiform (morphology): Said of a mineral that is like asbestos, i.e., crystallized with the habit of asbestos. Some asbestiform minerals may lack the properties which make asbestos commercially valuable, such as long fiber length and high tensile strength. With the light microscope, the asbestiform habit is generally recognized by the following characteristics..." (emphasis added by EEC).

A true definition cannot begin with the words "Said of". It is clear within the text of the two documents cited by Hanson, that the properties listed are general guidelines for commercial asbestos and not to be applied as a rule for all asbestos, particularly in non-commercial asbestos. Asbestos is reported by following the four-corners of each test method, and the results cannot be overruled by applying these general characteristics, particularly on a particle-by-particle basis.

#### Subsection 2: Other PMF's (Not Asbestos)

The Guide states:

*"It is important to emphasize that Hanson's Guide goes beyond "asbestos" and includes certain asbestiform minerals that Hanson has elected to treat as a potentially equivalent hazard as "asbestos."*

On the surface, Hanson appears to argue that it is conservatively including a wider range of particles in the analysis, where it is not. The document references fibrous amphiboles that were found by EPA to be present in vermiculite in Libby Montana, and fibrous zeolites (erionite), none of which are rare and not present at the Rockhill quarry. This statement deflects the attention away from the primary issue at the Rockhill quarry: actinolite, regardless of primary crystallization habit, likely possesses equivalent toxicity where asbestiform and non-asbestiform fibers are equivalent in length and width.

*"Other PMFs" are not "asbestos" and they are not currently regulated by most U.S. authorities in the same manner as "asbestos."*

Hanson appears to focus on fibers that can be argued as not regulated rather than focus on fibers that possess a toxicity that can produce an adverse health effect on workers and the community.

*"Furthermore, these cleavage fragments are not associated with asbestos-related diseases."*

This statement is false, and has been refuted by NIOSH and the scientific community at large. After an extensive review of scientific data, NIOSH concluded:

*"Given the inconclusive epidemiological evidence for lung cancer risk associated with exposure to cleavage fragments, NIOSH took a precautionary approach and relied upon the other two elements to recommend that the 0.1 f/cm<sup>3</sup> REL for airborne asbestos fibers also encompass EMPs from the nonasbestiform analogs of the asbestos minerals (see <https://www.cdc.gov/niosh/docs/2011-159/pdfs/2011-159.pdf>).*

*"In fact, the 1990 NIOSH testimony included an explicit assertion that the potential risk of lung cancer from exposure to EMPs (of the nonasbestiform asbestos analog minerals) warranted limiting such exposures. However, even if such EMPs were not hazardous, the inability of analytical methods to accurately distinguish countable particles as either asbestos fibers or cleavage fragments (of the nonasbestiform analog minerals) presents a problem in the context of potentially mixed exposures (i.e., asbestos fibers together with EMPs from the nonasbestiform analogs).*

#### **Section D: Mine Planning**

The Guide states:

*"These activities include, but are not limited to": ... "Qualitative Geologic Survey."*

To avoid liability, geologists often use the terms "qualitative" and "preliminary" when submitting data and recommendations in situations where the ability to conduct a full investigation was impeded by budget, requested scope, access, or other impediments. The term "survey" is often used to indicate that the investigation was more of a reconnaissance than complete investigation. Previous comments submitted in several EEC memoranda regarding this issue has been unheeded, and the term "qualitative" remains. Thus, the original and future investigations were and will be founded on an incomplete investigation, and any conclusions cannot be relied upon.

#### **Section E. Routine & Periodic Inspection Plan**

##### Bullet 2:

*"The geologist should visually inspect all active faces on operating levels of the quarry, walls, floors and benches that are safely accessible to determine if PMFs are or may be concentrated".*

A geologist cannot, through visual inspection, determine if "PMF's" are not present. The role of the geologist is to identify rock units and structures that are distinct from one another, and sample each litho-structural facies for submission to the laboratory. The geologist provides the basis by which test data can be interpreted. See below regarding the identification of "suspect material".

Bullet 8: Method to identify/confirm suspect material:

## Item 2:

*"Suspect material will be identified based on criteria defined by the geologist, including the following: any minerals identified in the rock that appear to be present in bundles of long, thin, flexible fibers".*

A geologist should observe and describe all textures and fabrics of the rocks or miner components, and not focus on this single characteristic which is rarely found in rocks that contain NOA. Macroscopically observable fibers and bundles are rare in igneous and metamorphic rocks that may contain NOA. If minerals do not "appear to be present", it is not designated as "suspect material" and not sampled.

Bullet 9: Action protocol

## Item 1:

*"If suspect material is found to contain protocol fibers, appropriate personnel will be informed, and additional sampling and testing may be initiated to determine if protocol mineral fibers are present or not".*

The term "suspect material" was defined in Section A as materials that are suspected of containing "protocol minerals". "Protocol minerals" is defined in Section C, which classifies minerals as "asbestos" only when they formed in nature with the asbestiform mineral habit. The Action Protocol calls on the field geologist to report a material as suspect material only when large bundles or fibers that can be observed with the unaided eye are present, and if so, sampling and testing may be initiated. This avoidance of testing materials based solely on macroscopic observations is a fully unacceptable practice for licensed geologists who perform NOA investigations. DEP should be reminded that following this practice, the diabase was deemed originally as a non-NOA material, a result of the asbestos being present as fine fibers that were detected only by transmission and scanning electron microscopy. It should be noted that the vast majority of Asbestos Containing Materials in buildings would be screened out and not tested if Hanson's approach were to be followed.

## Item 2:

*"Based on these results, actions will be undertaken to isolate and dispose of material if the amount is determined to be unacceptable".*

The only action provided is to isolate certain materials if determined to be "unacceptable" to the mining interests.

Bullet 10:

*"Active mining within a delineated affected area where suspect material has been identified must cease and cannot resume until appropriate personnel have reviewed inspection results and verify that PMF concentration is acceptably low (e.g., <0.1-0.25%) in the area, or appropriate actions have been taken to dispose of suspect material".*

Hanson appears to have created an arbitrary concentration of 0.25% by weight as a threshold to implement health and safety response actions. There is no national regulatory or scientific basis to delineate rocks with asbestos concentrations below 0.25% from those with concentrations  $\geq 0.25\%$ . OSHA regulates asbestos in any amount, and uses a 1% threshold to require elevated training, respiratory protection and site controls. EPA has repeatedly stated, based on activity-based sampling of road dust in the El Dorado Hills investigations, that high concentrations of asbestos can result from the disturbance of materials with very low levels of asbestos. For the San Francisco Public Utilities Commission, EEC conducted a worker-protection study of vehicles passing over road surfacing material the contained  $<0.1\%$  asbestos on average. The OSHA-metric PCMe concentrations within vehicle dust averaged 1.14 f/cc, above the OSHA short-term exposure limit (1.0 f/cc) and more than 10 times the OSHA PEL (0.1 f/cc). On a project for the Idaho Transportation Department, 513 million fibers per gram (MFG) was reported in an actinolite sample with a concentration of 0.23% by weight, and 8.9 billion fibers per gram were reported for chrysotile asbestos with a concentration of 0.14% by weight. Recently, on an undisclosed project, 44.1 Billion Fibers per Gram (BFG) were reported for chrysotile asbestos with a weight percentage of 0.33%. Numerous studies have corroborated EPA's conclusion, showing that it is the number of fugitive fibers that are important with respect to potential exposure, and not the weight of the fibers.

#### Bullet 12: Disposal protocol

Item 1:

*"Material identified as suspect material will be delineated by the site geologist".*

Again, the criteria that the geologist will use, according to the "Guide", is whether asbestos fibers are visible in hand specimen. It appears that none of the health and safety or dust suppression protocols that are listed will be mandated by the "Guide" because asbestos fibers at the Rockhill quarry are not visible to the unaided eye and asbestos concentrations in many samples have concentrations  $<0.25\%$ , the applicable threshold as stated in the "Guide".

#### **Appendix: Identification of Protocol Mineral Fibers**

Paragraph 1:

*"Qualified laboratory" means a laboratory accredited by the American Industrial Hygiene Association and/or the NIST National Voluntary Laboratory Accreditation Program for asbestos analysis".*

The accreditations listed above are the first criteria used to select a laboratory for asbestos analysis. The accreditation process includes an approved SOP, inter- and intra-lab QA exchanges, and successful participation in the Proficiency Analytical Testing program. The accreditation process assures that all laboratories are applying the same and correct criteria, and test results are accurate, precise and reproducible. However, the accreditation applies only to commercial asbestos in schools. This allows the laboratory to deviate from the rigors of the program by creating an independent and deviant test protocol, which will produce results that cannot be reproduced by other laboratories nor can they be deemed precise and accurate.

## Part 2

### Comments and Observations Asbestos Monitoring and Mitigation Plan

#### Section 3.3: Sampling Frequency

Hanson proposes to sample on a bi-monthly basis. Twice a month is inadequate to provide meaningful data regarding the potential exposure to offsite residents. Monitoring should be conducted daily.

Daily monitoring data is applied for two purposes. First, exceedances of a pre-determined threshold may provide information regarding the adequacy of dust control measures. The AMMP should include a mandated set of response actions, such as increased dust control, reduced level of disturbance, or even shut-down, depending on daily results or trends over several days. Second, the exposure risk is based on a continuous exposure scenario. Limited sampling will not capture the large variability in operational and weather conditions. Also, over six months, as Hanson proposes, only 12 days will be sampled. If Hanson, after six months, reduces the monitoring to perhaps once a month, the site will be monitored only 12 days per year, for a total of 138 samples over the 10-year project. This is a remarkably weak data set, and exposures cannot be reliably assessed.

Hanson proposes using 0.01 f/cc as a correction action threshold (but does not provide any specific corrective actions). This threshold has no stated technical basis. It may have been borrowed from OSHA regulations that require workspace monitoring where a containment in multi-workplace buildings is not present. The threshold is linked to the NIOSH 7400/7402 method used for worker protection, and the 0.01 f/cc was arbitrarily set at one-tenth of the worker PEL. This threshold can be used only for its intended purpose, within the intended context, using the prescribed test method, and for worker protection only.

EEC has previously recommended that DEP, using their own consultants, conduct a thorough risk assessment to develop a site-specific risk-based threshold for the Rockhill site. The threshold would be linked to a specific test method. This threshold can be used for daily monitoring of dust control, and the running average of test results be used to monitor the actual continuous exposure to residents.

#### Section 3.4: Analytical Methods

Hanson proposes to reanalyze samples that are analyzed by ISO 10312 by NIOSH 7400 and 7402, citing that the intention is to compare results. They also state that they intend to petition DEP to retire the ISO 10312 analysis and replace it by NIOSH 7400 and 7402. They state:

*"These PCM methods are used to count all visible fibers, including non-asbestos fibers, that are longer than 5  $\mu$ m with a 3:1 aspect ratio or greater".*

The passage, as written, is deceptive by suggesting that the PCM method is equivalent. The ISO and PCM methods are far from equivalent. First, PCM and TEM employ different

microscopic techniques. More important, PCM analyzes and reports only fibers that are  $\geq 5\mu\text{m}$  in length and between  $0.25\mu\text{m}$  and  $3\mu\text{m}$  in width. ISO reports fibers that are  $\geq 0.5\mu\text{m}$  in length and all widths. PCM does not require the reporting of thin fibers simply because they are not visible. Thus, the results of the two methods cannot be compared. More importantly, if DEP allows PCM to replace ISO, the vast majority of fibers that are less than  $5\mu\text{m}$  in length and less than  $0.25\mu\text{m}$  in width will not be reported, resulting in a major under reporting of asbestos concentrations.

Hanson also states:

*"For the purposes of determining whether corrective action is necessary, this analysis will only count asbestos fibers that exceed 5 micrometers in length".*

DEP intended that all fibers that are  $\geq 0.5\mu\text{m}$  be reported and the resulting concentrations be applied to any agreed upon perimeter threshold. Hanson appears to be circumventing this directive, and intends to use a subset of particles rather than the whole data set.

#### Subsection: Analytical Laboratory

As stated above, Hanson cites the minimum requirements for a lab as "part of the National Voluntary Laboratory Approval Program (NVLAP)". The NVLAP accreditation is required for building materials in schools, but not required for other asbestos testing such as NOA. The NVLAP requires adherence to an approved Standard Operation Procedure (SOP), and quality assurance procedures that include inter-laboratory exchanges and analysis to assure precision, accuracy and reproducibility. If the laboratory is required to hold the NVLAP accreditation, then the bulk and air samples should be incorporated into the NVLAP protocol. Recall that when RJJG was asked to submit an SOP for the testing of NOA, their response was that they did not have one, and the analyses were conducted by "40 years of experience". When EMSL laboratories was asked for an SOP, they also did not possess one, and stated that differential counting procedures, as RJLG employs, is subjective. It is doubtful that DEP is requiring a lab to be accredited but then allows the lab to forgo the procedures of the accreditation and employ internal and undocumented methodologies that remove asbestos fibers that would have been reported under the NVLAP accreditation. DEP should also be reminded that RJLG does have, in fact, an operating procedure that was published in Appendix A of the EPA Sparta, New Jersey project, which clearly illustrates the procedure of eliminating asbestos particles that would otherwise require reporting under the NVLAP program. See Appendix A of:

<https://www.state.nj.us/dep/dsr/sparta/Core%20final%20report.pdf>

#### Subsection: Quality Control

The entire Quality Control program is stated in three sentences:

*"A quality control (QC) program will be implemented to assure data quality. The field program includes the use of blanks and duplicate samples. Should any sample fail at a particular location, that sample at that location will be resampled within two weeks".*

The failings of the QC program are far greater than can be addressed here, and can easily be recognized by DEP. Not only are there virtually no QC procedures, there is nothing about air monitoring, which is the subject of the AMMP. The QC program required by the NVLAP accreditation includes blanks, blind recounts, inter-laboratory re-analysis, intra-laboratory re-analysis, and many other elements. At a minimum, and as recommended previously by EEC, DEP should require re-analysis of each type of sample by an independent laboratory that is chosen by, and reports to, DEP. To prevent institutional bias, DEP should also select the samples to be submitted to the QC laboratory.

### Section 3.6- Corrective Actions

Hanson states:

*"For the purposes of determining whether corrective action is necessary, Hanson will only count asbestos fibers that exceed 5 micrometers in length. If TEM analysis confirms asbestos fiber concentrations in excess of 0.01 fiber/cc in any sample".*

Hanson appears to be circumventing DEP's request to report all asbestos fibers by applying a small subset of fibers for action item purposes. One of the purposes of perimeter monitoring is to verify that dust control measures are applied and sufficient to minimize fugitive dust, including asbestos, from crossing the site perimeter. Selective removal of a fiber subset would not achieve this purpose. Also, while the 5 $\mu$ m length is used by OSHA for worker protection, EPA makes no distinction. If EPA requires the reporting of all fibers, bundles, clusters and matrix structures that are  $\geq 0.1\mu$ m for re-occupancy in school buildings, why would DEP feel it appropriate to selectively remove all fibers that are  $\leq 5\mu$ m for children who reside or attending school near the site?

Hanson also states:

*"Hanson will undertake the following corrective measures to abate any potential harmful migration of asbestos fibers".*

Hanson appears to represent themselves as an expert at what is considered "harmful", and has not produced any information regarding the criteria. This vague reference and criterion that has no basis will allow Hanson, if the plan is approved, to make arbitrary decisions regarding the reporting of asbestos at perimeter stations. These decisions should be health-based and made by DEP and DOH and based on standards of practice that are normally employed on NOA sites, rather than arbitrary criterion prescribed by Hanson and the mining industry in general.

Subsection 2: Hanson states that daily air monitoring for seven days will be implemented only at a station when and where an exceedance occurs. As discussed above, Hanson proposes to sample only twice a month, representing less than seven percent of operational time. If conditions change, such as a wind shift, the remaining stations cannot detect an elevated concentration, and fugitive fibers can escape unabated nearly indefinitely.

Subsection 4: Hanson presents some action items that may occur, but does not commit to actually implementing them. As written in the plan, work that caused the exceedance may occur unabated with no corrective action implemented.

#### Section 4: Activity-Based Air Monitoring

Hanson states that Activity-Based Air Monitoring (known as Activity-Based Sampling, or "ABS") will be conducted four times a year for three years. Four samples collected in four days is insufficient to adequately characterize emissions, and one to three years is far too late to adequately respond to the data. The plan also defeats one of the primary purposes of ABS. A sufficiently robust sample set should be collected at the beginning of the project, and the purpose of the program and use of the data should be prescribed before samples are collected. One purpose is to characterize emission rates of each activity and apply them to air models designed to calculate a risk-based project perimeter threshold. The section, as written, appears to be a gratuitous sampling program with no purpose other than apparent compliance with DEP's request.

Hanson provides the criteria to be used as an action threshold, as follows:

*"If TEM analysis confirms asbestos fiber concentrations in excess of MSHA asbestos standard (0.1 f/cc) in any sample..."*

Hanson is effectively selecting the least restrictive published action level that was designed for one purpose, and inappropriately applying it to samples that were designed for a very different purpose. The MSHA and OSHA standards are to be used solely for workers who actively disturb asbestos, and cannot be applied to samples and analyses that are designed for public safety. Samples where the 0.1 f/cc are applied are sampled within the worker's breathing zone, and exceedances of the threshold require additional respiratory protection. Neither MSHA nor OSHA allow concentrations in samples collected downwind, or even within the cab of an excavator, for example, to be applied as a surrogate for the worker standard.

Consider how the asbestos concentration in ABS or perimeter samples can be reduced by applying the OSHA/NIOSH 7400 PCM metric, and further modified by applying the unverifiable differential counting protocols. A sample with a measured concentration of asbestos will be composed of long fibers ( $\geq 5\mu\text{m}$ ) and short fibers ( $< 5\mu\text{m}$ ). Of these, some are thin fibers ( $< 0.25\mu\text{m}$ ) and some wide ( $\geq 0.25\mu\text{m}$ ). Applying the PCM metric will remove all short fibers and all thin fibers from reporting, leaving a small subset of long wide fibers. Both Hanson and RJLG have argued that asbestos fibers are dominantly thin, and cleavage fragments are dominantly wide, and therefore, the remaining population may be eliminated on the grounds that they are cleavage fragments and not asbestos. The result: no asbestos detected.

### **Section 6.2: Emissions Mitigation Plan**

#### Stockpiles and material handling:

Hanson states that it

*"will ensure that material being excavated, crushed, screened, loaded, transferred or conveyed does not result in visible dust"*



*emissions exceeding 40 CFR Part 60, Subpart 000 limits for applicable sources”.*

Note that this standard includes more than visible emissions, and does not include any testing for asbestos should the visible emission standard be exceeded. Crushing and processing, drilling, blasting, and excavation are high-emission activities, and DEP should ensure that each activity be monitored for asbestos with a frequency sufficient to ensure that fugitive asbestos emissions remain low.

### Crushing and Sizing Equipment

The crushing and sizing operation is one of the largest sources of fugitive asbestos emissions. Hanson states that air pollution control devices will be used, but these are not HEPA-filtered and not designed to remove very fine particles. Hanson omits the most obvious method of dust control: wetting. The wetting of material as it is offloaded and throughout the conveyor will help prevent dust emissions from the fine material, but cannot prevent dust that is generated during the crushing of rock.

This topic is discussed in more detail, below.

### Drill Rigs

On-board dust collection systems that often consist of a shrouded system using dry cyclone/filter collection techniques. Unless fitted with a HEPA filtration exhaust capture system, these systems are not designed to capture nor are efficient in capturing fine particles. Water sprays on drill rigs do not capture fugitive asbestos particles, as discussed above. NIOSH recommends (see Chapter 4 of the NIOSH dust control manual) wet drilling techniques where water is injected at the drill bit along with air, allowing cuttings to be flushed out by flowing water and not air. NIOSH states that wet drilling techniques can provide dust control efficiencies of up to 96%.

### Blasting

According to Hanson, the only dust control measure for blasting will be pre-wetting of the blast area. The hard rock at the Rockhill quarry cannot be wetted, and therefore, no preventative dust control measures will be employed at the site. Hanson previously stated that there are no feasible asbestos dust control measures for blasting.

**Part 3**  
**Comments and Observations**  
**Appendix A**  
**Preliminary Sampling Results Collected from**  
**Perimeter Air, Water, And Overburden Locations**  
**at the Rock Hill Quarry**

ISO 10312 Results

1. A footnote on the lab reports indicate that samples will be disposed of in 90 days. EEC recommends that that all samples be held or archived indefinitely, and DEP select a subset to be re-analyzed by a third-party laboratory that reports directly to DEP.
2. A statement within the footer of the analytical reports state that RJLG is accredited by the AIHA and the New York Department of Health, but does not indicate that they are NVLAP accredited, as required by Hanson's sampling plans. It is curious that RJLG would omit the most important and comprehensive accreditation on their reports. RJLG should indicate that they are NVLAP accredited, and follow all procedures and protocols that are normally followed under that accreditation. The procedures used for asbestos testing under the NVLAP accreditation does not include the removal of fibers based on an opinion that they are not asbestiform.
3. It is presumed that the test results were air samples collected for ambient conditions characterization. Assuming that the testing was conducted in accordance with the test method and no attempt to remove fibers occurred, the test results (all below the analytical sensitivity) show that there are no offsite sources of asbestos, and any asbestos detected during operations will be fully attributed to those operations.

Non-Potable Water Analysis

RJLG applies a relatively high analytical sensitivity of 0.7 million fibers per gram (MFG) as the stopping rule to conclude the analysis. This may have been used because it is one-tenth of the drinking water standard of 7 MFL for fibers longer than 10 $\mu$ m. EPA method 100.2, however, requires an analytical sensitivity of 0.2 MFL. EPA method 100.1 does not provide a target analytical sensitivity, but states that an analytical sensitivity of 0.01 MFL can be achieved. Considering that the water is for non-potable uses, DEP should consider a requirement for a lower analytical sensitivity that is aligned with the test methods. Elevated analytical sensitivities result in a failure to detect asbestos present in low concentrations, possibly giving a false impression that no asbestos is present in the water.

Rock (Bulk) Analysis

RJLG continues to differentiate asbestos from non-asbestos by referring to general descriptions of asbestos that are associated with commercially mined asbestos. They state:

*"The morphology of each counted amphibole particle was characterized as asbestiform or non-asbestiform (i.e. cleavage) using the asbestiform definitions provided in ISO 22262-1".*

ISO 22262-2 states:

*"When present, these amphibole minerals often occur as mixtures of the two analogues in industrial minerals".*

ISO 22262-2 does not, however, provide a protocol to differentiate for reporting purposes these two analogues, and neither does any other standardized test method for asbestos. The method defines a fiber as an elongate particle which has parallel or stepped sides, and provides the dimensions in terms of length and aspect ratio for fibers that should be counted and reported. When a fiber by definition is determined to be actinolite, for example, the method does not provide a secondary step where that fiber can be classified as a cleavage fragment, and does not provide any language where any particles that are classified as asbestos can be eliminated from the reporting as asbestos. By re-classifying particles as cleavage fragments, RJLG is effectively reducing the concentration of asbestos as would normally be reported by adherence to the test method. As has been pointed out in previous EEC documents, EPA, USGS and NIOSH have all refuted this practice.

## Part 4

### Comments and Observations Hanson's Response to PADEP April 12, 2021 Technical Deficiency Letter

#### Module 8.4: Surface Water Information §77.406, §77.532, §77.521

##### Release of Stormwater

Hanson proposes using the Federal drinking water standard of 7 MFL with fibers  $\geq 10\mu\text{m}$  as a waste discharge threshold. This is another example of applying a very restricted fiber length criteria that is used for one purpose, and applying it to another unrelated purpose. The drinking water standard is applied to ambient conditions in a water body such as municipal drinking water sources, and the standard is considered protective for ingestion. It is not a standard that is to be applied to waste discharge into drinking water sources or other sensitive water resources. If this was not the case, then all sources of asbestos, such as diluted asbestos abatement shower water, could be discharged into lakes and streams as long as the water has been diluted sufficiently by shower water to achieve the standard. Normally, water that has been impacted by asbestos and is declared a waste is discharged to municipal sewer systems where it is treated prior to discharge under the conditions of their permit. DEP and DOH should consult with EPA regarding the appropriate method or conditions of discharge to assure that there is no degradation to Bog Run.

#### Module 10.1: Equipment and Operation Plan: "Annual Removal of 500 tons.": §77.452, §77.455, §77.404(5)

##### First Paragraph: DEP comment regarding the reported asbestos concentrations.

1. Note that Hanson states: "*ISO 10312 states explicitly that it cannot differentiate asbestiform from non-asbestiform morphologies of the amphiboles in fibers collected from an air sample*". Why, then, is RJLG ignoring this fact, which is universally recognized for all test methods, and applying subjective differentiating methods to bulk samples analyzed by ISO 22262-2, as discussed above? It is not appropriate to differentiate based on morphology, and the reported concentration is the sum of each concentration.
2. The argument whether the asbestos content is higher or lower than 0.11% seems irrelevant. RJLG's own petrographic analysis indicated that asbestos is pervasive throughout the diabase, and therefore, the processed material is an asbestos-containing product.

##### DEP question (a): Why Hanson believes these aggregate piles may be safely disturbed under any conditions.

Hanson did not address this concern, and provided only a summary of dust control measures. There is no evidence that the material may be safely disturbed under any conditions.

DEP question (b): Where and how this aggregate will be used, if at all.

DEP question (c): Explain how receivers of the aggregate will be advised of the asbestos content of the aggregate and precautions they will be required to take concerning the use of the aggregate.

Hanson's response to these questions seems evasive and avoided the intent of the questions. Hanson states that the material will be used for surfacing applications, which is one of the highest-risk uses because it is not contained or covered. Material that is used for unpaved roads may be particularly problematic. Hanson also states that disclosures will be provided "as appropriate", and will adhere to OSHA and MSHA disclosure requirements, which are not prescriptive.

Because OSHA regulates asbestos in any amount, and requires hazard communication, training, personal monitoring, and other requirements, all workers and recipients of the asbestos-containing product require full disclosure of asbestos content, starting with the haul truck driver who receives the material. OSHA compliance continues with workers in charge of off hauling, and those who spread or place the material at the project site. The companies who purchase the material and employ the workers require disclosure, as does the owner of the site where the material is placed. The material will require tracking by the owner to allow disclosure to those who may disturb the material during maintenance or repair. To achieve full disclosure, the site should be posted with an asbestos warning, and all workers and recipients of the material should receive written notification that they are receiving an asbestos-containing product, along with notification that the material needs to be handled in accordance with OSHA regulations. A copy of the OSHA standard would be helpful.

DEP should consider that the producer (Hanson), all companies who disturb the material, and land owner where final disposition occurs (in some cases, the State of PA), may be held liable for any real or perceived adverse exposure. Hanson is not the only entity that is responsible for issues that occur downstream from the mining site.

### **Module 10.8: Special Handling of Toxic Material §77.452, §77.404**

DEP question (b): Please describe in detail the procedures that will be employed in the handling of NOA including NOA containing rock and/or soil.

Hanson states:

*"For the purposes of developing Hanson's plans, Hanson assumes that all rock and soil at the Quarry will have trace levels of these asbestiform minerals present unless tested and shown not to contain detectable asbestos".*

It appears that Hanson anticipates further sampling may somehow transform the material from an NOA unit to a non-NOA unit. This is not possible from a technical and regulatory perspective.

1. *Geological Perspective:* In the original geologic survey, the diabase was declared by the professional geologist as homogeneous, and this has not been subsequently refuted. RJLG showed that the actinolite within the diabase occurred through in situ replacement of pyroxene to asbestiform actinolite

through metamorphic processes. Thus, the actinolite is pervasively distributed throughout the diabase, and the test results are representative of the unit as a whole. The diabase, which appears to comprise the entire mining area, is an NOA-bearing unit, and no additional testing can change that fact.

2. *Regulatory Perspective:* In building materials, where the regulations for asbestos originated, neither EPA nor OSHA allows the compositing of samples. Also, if one sample of multiple samples collected from a discrete material tests positive for asbestos, the entire material is deemed asbestos-containing, regardless of other samples that may test negative. For compliance purposes, the highest asbestos content is taken as the content for the entire material. Thus, the mathematical dilution of the asbestos content via the averaging of the site test results is not permissible.

### **Module 17.2: Air Pollution Control Plan: §77.455, §77.452, §77.458, §77.631**

DEP question (h)(xv): Please provide specific engineering detail(s) on all devices planned to be used for dust suppression specific to each operational application including rates of application.

Hanson states:

*"At such time a fixed aggregate processing plant would be constructed, Hanson will likely employ a dust suppression system, such as Nesco Dust Pro, Dustboy or equivalent as appropriate. Information on the Nesco systems are on the Nesco Website".*

Section 3 of the NIOSH Dust Control Handbook for Industrial Minerals Mining and Processing, second edition (2019), shows that misting systems can capture particles only when the particle size is comparable to the droplet size. According to the Nesco website, the systems with the finest droplets is the DustPro with a droplet size of 50µm-200µm, and the DustProHP with a droplet size of 20µm-80µm. These water droplet sizes are far too large to capture asbestos by impact, whose average lengths and widths are far below these ranges. In addition, unlike chrysotile asbestos, amphiboles are widely known in the asbestos industry to be "hydrophobic" in the sense that they are not easily wetted. Thus, the dust suppression systems will tend to disperse asbestos particles rather than capture them. These systems provide the appearance that they work because they are efficient in capturing large visible dust particles, but unfortunately, do not capture fine invisible respirable dust.

DEP question (b): Attachment 4(b)(ii) Draft Air Monitoring

(i): Please explain the reference to the 5 micrometers in length in the definition of asbestos fiber...

Hanson goes to great lengths to explain the current science regarding risk associated with long vs. short fibers. In several memoranda, EEC recommended that DEP and DOH conduct an independent site-specific risk assessment based on site data and weather conditions. The assessment should be in conformance with standard EPA risk assessment protocol, and a risk-based threshold should be calculated that is based on the proposed counting metric. It is not enough to propose that only long fibers be counted and then choose an arbitrary threshold with no direct link to the measured

results. DEP and DOH should consider other factors that may be important. For example, there is considerable consensus that amphibole asbestos has a higher potency than chrysotile, possibly as high as a factor of ten (the potency used in EPA's method applies the potency of chrysotile). Also, DEP required Hanson to base their analyses on the ISO 10312 direct transfer method, and it is possible to produce a risk-based threshold based on this counting metric, which would produce a complete and more statistically significant data set.

DEP question (c)(i): Please provide a plan to determine background offsite NOA levels in surrounding communities and vulnerable populations.

Hanson appears to have misunderstood DEP's question and DOH's recommendation to collect samples within the community. They also appear to mis-comprehend the purpose and value of ambient sampling.

Hanson presents a list of occupational-based studies that have little bearing on the subject at hand. The dispersion of asbestos and reduction of concentrations with distance is well known, but is not relevant to ambient monitoring, nor is it applicable to monitoring at this particular site. Ambient monitoring is designed to measure asbestos concentrations when operation activities are absent, and have no relationship to asbestos concentrations that may occur when mining occurs. The low detections in the site ambient stations show that there are no sources of asbestos upwind of the site, nor on the site due to, for example, wind stripping of loose material. The data collected so far indicates that any asbestos measured during operations at the perimeter will necessarily be attributed solely to mining operations. If Hanson is proposing that community-based ambient sampling should not be required, and DEP and DOH agrees, then any asbestos within the community measured during operations will necessarily be attributed to the mining operations.

DEP question (c)(x): Please define an action level for asbestos sample results. Based on previous discussions it is suggested that this be 0.01 fibers/cubic centimeter (f/cc).

Hanson proposes an action level of 0.01 f/cc, but provides no information regarding its source or why it is protective of the community. It appears that Hanson is advocating the application of the OSHA and MSHA worker protection standard as a surrogate for community exposure. One cannot apply test methodology and action limits that were designed for one purpose (worker protection) to a monitoring program that is designed for another purpose (community exposure). EPA has not adopted the OSHA and MSHA standard for community exposure purposes, and OSHA and MSHA does not allow a modification of the required test methodology and application of a different threshold during asbestos projects. The two are regulatory and technically distinct.

**DEP question 10: Please provide an up to date comprehensive NOA Monitoring and Risk Mitigation Plan for the Rock Hill Quarry.: §77.451, §77.105, §77.130.**

(c) Please detail all methods, protocols and compliance standards that will be employed to monitor the migration of NOA from the Rock Hill Quarry Site.

Response number 4 states:

*"The corrective actions **may** include investigation of the source of any airborne asbestos, extra dust suppression measures, cleanup, repairs*

*or modifications to systems and controls, or temporary cessation of operations". (emphasis added)*

The use of the term "may" allow for no corrective actions to be implemented at the discretion of the site manager.

(d) All methods, protocols and compliance standards that will be employed to control migration of NOA from the Rock Hill Quarry site whether they be in air, water, overburden, waste, or products produced by the Rock Hill Quarry.

Bullet point no. 4, Product:

Hanson states:

*"Customers are provided Safety Data Sheets as necessary. The OSHA and MSHA Hazard Communication Standards require product warnings that meet their specifications. This is normally conveyed in Safety Data Sheets and weigh ticket warnings. The Quarry will comply with all OSHA and MSHA warning regulations. So long as the asbestos content does not exceed the 1.0% limit from TSCA, or 0.1% from OSHA, measured using an appropriate method for bulk materials, there is no regulatory requirement to label this material as asbestos containing".*

As stated, Hanson seems to be representing that, effectively, no communication of hazards associated with asbestos is required.

Section 1910.1200(a) of the Hazard Communication Standard states: *"The purpose of this section is to ensure that the hazards of all chemicals produced or imported are classified, and that information concerning the classified hazards is transmitted to employers and employees".* It can be argued that NOA is not a chemical that has been produced, and therefore, not subject to the Standard.

The OSHA and MSHA Standards focus on materials classified as Asbestos Containing Material (ACM), defined as a material with asbestos concentrations >1%. For example, Section 1926.1101(k)(4) of the OSHA Standard states: *"In addition to the above requirements, all employers who discover ACM and/or Presumed ACM on a worksite shall convey information concerning the presence, location and quantity of such newly discovered ACM and/or Presumed ACM to the owner and to other employers of employees working at the work site, within 24 hours of the discovery".*

The 1% threshold is cited in the Standard because it is well known that manufacturers who added asbestos to increase product performance added asbestos in concentrations that exceed 1%. This binary yes or no threshold does not exist in geologic materials.

However, other passages within the Standard refer to materials that are "asbestos-containing" (not ACM). For example, Section 1926.1101(k)(8)(i) of the OSHA Standard states: *"Labels shall be affixed to all products containing asbestos and to all containers containing such products, including waste containers. Where feasible, installed asbestos products shall contain a visible label".*



Hanson has repeatedly argued that the average asbestos concentration in the diabase is less than 0.1%, and therefore, based on Hanson's response, no labeling any kind will be required.

If true, this is quite problematic for a material where asbestos is known to be present, because the OSHA Standard (who's jurisdiction begins outside of the quarry) is triggered where asbestos is present in any amount. Contractors who accept and use the material will not be aware that the Standard is enforceable, and none of the special asbestos-related worker protection requirements will be implemented. Owners of the property where projects occur will not be aware of potential liability that is associated with ownership of material that is asbestos containing. DEP and DOH will not be aware that a state highway project involving NOA disturbance may be occurring within or near a residential community.