

Mr. Steve Stroschein  
Pattison Sand Company  
701 1st Street  
Clayton, IA 52049

May 04, 2016

DOH ELAP #11626  
AIHA-LAP #100324

Account# 21102

Login# L373526

Dear Mr. Stroschein:

Enclosed are the analytical results for the samples received by our laboratory on April 27, 2016. All test results meet the quality control requirements of AIHA-LAP and NELAC unless otherwise stated in this report. All samples on the chain of custody were received in good condition unless otherwise noted.

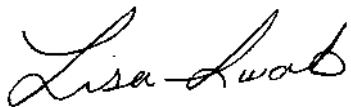
Results in this report are based on the sampling data provided by the client and refer only to the samples as they were received at the laboratory. Unless otherwise requested, all samples will be discarded 14 days from the date of this report, with the exception of IOMs, which will be cleaned and disposed of after seven calendar days.

Current Scopes of Accreditation can be viewed at [www.galsonlabs.com](http://www.galsonlabs.com) in the accreditations section under the "about Galson" tab.

Please contact Patty Gregorich at (888) 432-████, if you would like any additional information regarding this report. Thank you for using SGS Galson Laboratories.

Sincerely,

SGS Galson Laboratories



Lisa Swab  
Laboratory Director

Enclosure(s)

Galson Laboratories, Inc. is now a part of SGS, the world's leading inspection, verification, testing, and certification company. As part of our transition to SGS, you will begin to see some formatting changes with reports that will improve the presentation of data and allow for the transition to the new logo.



GALSON

LABORATORY ANALYSIS REPORT

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-
FAX: (315) 437-
www.galsonlabs.com

Client : Pattison Sand Company
Site : Clayton County
Project No. : IH Mont.
Date Sampled : 22-APR-16
Date Received : 27-APR-16

Account No.:
Login No. :
Date Analyzed : 28-APR-16 - 29-APR-16
Report ID : 934063

Respirable Dust and Crystalline Silica: Quartz

Table with 8 columns: Sample ID, Lab ID, Analyte, Air Vol (l), mg, %, mg/m3, Dust PEL (mg/m3). Rows include sample IDs PSC-04-RD-212, PSC-06-RD-214, PSC-03-RD-215, and PSC-05-RD-216.

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of quantitation: Dust 0.050mg Q:0.0050mg
Analytical Method : mod. NIOSH 0600/7500/mod. OSHA ID-142; Grav./XRD
OSHA PEL : see 1910.1000 (Table Z-3)
Collection Media : PVC PW 37mm
Submitted: PAH/CMR
Approved : CRI/AJD
Date : 04-MAY-16
Supervisor: KRK/CRI
NYS DOH #: 11626
QC by : KSB

< -Less Than mg -Milligrams kg -Kilograms ppm -Parts per Million
> -Greater Than ug -Micrograms m3 -Cubic Meters NS -Not Specified
NA -Not Applicable ND -Not Detected l -Liters mppcf -Million Particles per Cubic Foot



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Report ID : 934063

Respirable Dust and Crystalline Silica: Quartz

Table with 7 columns: Sample ID, Lab ID, Analyte, Air Vol (l), mg, %, mg/m3, Dust PEL (mg/m3). Row 1: PSC-07-RD-217, L373526-5, Dust, 894.2, <0.050, ND, <0.056, 5.0. Row 2: PSC-07-RD-217, L373526-5, Quartz, 894.2, <0.0050, ND, <0.0056, 5.0.

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of quantitation: Dust 0.050mg Q:0.0050mg
Analytical Method : mod. NIOSH 0600/7500/mod. OSHA ID-142; Grav./XRD
OSHA PEL : see 1910.1000 (Table Z-3)
Collection Media : PVC PW 37mm
Submitted: PAH/CMR
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Date : 04-MAY-16
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### MSHA Silica Summary

Sample ID	Lab ID	SWA mg/m3	TLV mg/m3	Error Factor	TLV*EF mg/m3	SWA/ TLV*EF	Citation Level
^ PSC-04-RD-212	L373526-1	<0.061	0.098	1.2	0.12	<0.52	BELOW
PSC-06-RD-214	L373526-2	<0.061	5.0	1.2	6.0	<0.010	BELOW
PSC-03-RD-215	L373526-3	<0.061	5.0	1.2	6.0	<0.010	BELOW
PSC-05-RD-216	L373526-4	<0.061	5.0	1.2	6.0	<0.010	BELOW
PSC-07-RD-217	L373526-5	<0.061	5.0	1.2	6.0	<0.010	BELOW

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of quantitation: Dust 0.050mg Q:0.0050mg  
 Analytical Method : mod. NIOSH 0600/7500/mod. OSHA ID-142; Grav./XRD  
 OSHA PEL : see 1910.1000 (Table Z-3)  
 Collection Media : PVC PW 37mm

Submitted: PAH/CMR  
 Approved : CRI/AJD  
 Date : 04-MAY-16  
 Supervisor: KRK/CRI

NYS DOH #: 11626  
 QC by : KSB

< -Less Than      mg -Milligrams      kg -Kilograms      ppm -Parts per Million  
 > -Greater Than    ug -Micrograms      m3 -Cubic Meters    NS -Not Specified  
 NA -Not Applicable    ND -Not Detected      l -Liters      mppcf -Million Particles per Cubic Foot



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## LABORATORY FOOTNOTE REPORT

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Date Sampled : 22-APR-16  
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Account No.:  
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This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained herein reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise noted below, all quality control results associated with the samples were within established control limits or did not impact reported results.

Note: The findings recorded within this report were drawn from analysis of the sample(s) provided to the laboratory by the Client (or a third party acting at the Client's direction). The laboratory does not have control over the sampling process. The findings herein constitute no warranty of the samples' representativeness of any sampled environment and strictly relate to the samples as they were presented to the laboratory.

Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceding the final result column may have been rounded and therefore, if carried through the calculations, may not yield an identical final result to the one reported.

The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).

Unless otherwise noted below, reported results have not been blank corrected for any field blank or method blank.

L373526 (Report ID: 934063):

Gravimetric analytical accuracy of the sampling media is -0.001 +/- 0.006 mg (average blank weight change +/- 95% confidence interval or k=2). The estimated uncertainty applies to the media, technology, and SOP(s) referenced in this report and does not account for any uncertainty associated with the sampling process. Filter(s) tared in April 8, 2015. We recommend using filters within one year of the initial tare weighing. SOPs: GRAV-SOP-5(15), GRAV-SOP-6(15), ix-calibrate(11), ix-xrdashprep(25), ix-xrdreview(13), ix-xrdstdprep(25)  
 We perform a quantitative secondary angle confirmation on all Quartz results greater than 0.025 mg. Secondary angle quantitative confirmation is not possible below 0.025mg.  
 We were able to confirm Quartz in sample L373526-1 qualitatively using the secondary angle.

^L373526-1 (Report ID: 934063):

PEL and SWA/TLV\*EF are based on maximum possible percent Quartz.

<	-Less Than	mg	-Milligrams	m <sup>3</sup>	-Cubic Meters	kg	-Kilograms	ppm	-Parts per Million
>	-Greater Than	ug	-Micrograms	l	-Liters	NS	-Not Specified	ND	-Not Detected
								NA	-Not Applicable



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Accuracy and mean recovery data presented below is based on a 95% confidence interval (k=2).  
 The estimated uncertainty applies to the media, technology, and SOP referenced in this report  
 and does not account for the uncertainty associated with the sampling process.

Parameter	Accuracy	Mean Recovery
Quartz	+/-11.8%	98.1%

< -Less Than      mg -Milligrams      m3 -Cubic Meters      kg -Kilograms      ppm -Parts per Million  
 > -Greater Than    ug -Micrograms      l -Liters            NS -Not Specified    ND -Not Detected      NA -Not Applicable

1257331F0393169175  
 Date: 04/27/16  
 Shipper: UPS  
 Initials: SK  
 Prep: UNKNOWN  
 L 373526

New Client? Report To\*: Pattison Sand Company  
701 1st Street  
 Client Account No.\*: Clayton, IA 52049  
21102  
 Attn: Safety Dept.  
 Phone No.\*: (563) 964-2860 ext. 125  
 Cell No.: \_\_\_\_\_  
 Email Results to: Steve Stroschein; Kamran Ardestani  
 Email address: sstroschein@pattisonsand.com; kardestani@pattisonsand.com

Invoice To\*: Pattison Sand Company, LLC  
701 1st Street  
Clayton, IA 52049  
 Attn: Zach Roberson  
 Phone No.: (563) 964-2860 ext. 129  
 Email: zroberson@pattisonsand.com  
 P.O. No.: \_\_\_\_\_  
 Credit Card:  Card on File  Call for Credit Card Info.

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Samples submitted using the FreePumpLoan™ Program  Samples submitted using the FreeSamplingBadges™ Program

Need Results By:	(surcharge)
<input checked="" type="checkbox"/> 5 Business Days	0%
<input type="checkbox"/> 4 Business Days	35%
<input type="checkbox"/> 3 Business Days	50%
<input type="checkbox"/> 2 Business Days	75%
<input type="checkbox"/> Next Day by 6pm	150%
<input type="checkbox"/> Next Day by Noon	100%
<input type="checkbox"/> Same Day	200%

Site Name : Clayton County Project : IH Mont. Sampled by : Kamran Ardestani/ Tim Adkins

Comments :

Area Samples around pattison mine site. Clayton Iowa, Guttenberg Iowa, N. farm house.

List description of industry or Process/interferences present in sampling area :  
**Sand Mining/ Hauling**

State samples were collected in (e.g., NY) : **IA**

Please indicate which OEL this data will be used for :  
 OSHA PEL  ACGIH TLV  Cal OSHA  
 MSHA  Other (specify):

Sample Identification* (Maximum of 20 Characters)	Date Sampled	Collection Medium	Sample Volume Sample Time Sample Area*	Sample Units* L, ml, min, in2, cm2, ft2	Analysis Requested*	Method Reference^	Hexavalent Chromium Process (e.g., welding plating, painting, etc.)*
PSC-04-RD-212	4-22-16	2PC PVC <i>pyl</i>	528 MIN	1.7 L	Respirable dust and dust as Quartz		
Clayton IA township							
PSC-06-RD-214	4-22-16	2PC PVC	482 MIN	1.7 L	Respirable dust and dust as Quartz		
Mississippi Rd.							
PSC-03-RD-215	4-22-16	2PC PVC	502 MIN	1.7 L	Respirable dust and dust as Quartz		
Kay Vifian							
PSC-05-RD-216	4-22-16	2PC PVC	485 MIN	1.7 L	Respirable dust and dust as Quartz		
Guttenberg IA							
PSC-07-RD-217	4-22-16	2PC PVC <i>skultz</i>	526 MIN	1.7 L	Respirable dust and dust as Quartz		
Gravel Rd outside Guttenberg							

\*Galson Laboratories will substitute our routine/preferred method if it does not match the method listed on the COC unless this box is checked:  Use method(s) listed on COC

For metals analysis: if requesting an analyte with the option of a lower LOQ, please indicate if the lower LOQ is required (only available for certain analytes - see SAG) :

For crystalline silica: form(s) of silica needed must be indicated (Quartz, Cristobalite, and/or Tridymite) : **Quartz**

Chain of Custody	Print Name	Signature	Date/Time
Relinquished by :			
Received by LAB :	<i>M. Lewis</i>	<i>M. Lewis</i>	<i>4/27/16 1150</i>