

Sheet A #1	<b>AIR CONTAMINANT DATA SHEET</b>		Department of Licensing and Regulatory Affairs Michigan Occupational Safety & Health Administration Consultation Education & Training Division
C# 1200012	<b>Employer:</b>	Pioneer Construction	<b>IH:</b> Harvey Johnson, CIH
<b>Date:</b> February 17, 2017	<b>Location:</b>	Grand Rapids, MI	

Contaminant	TWA limit	STELimit	CEILING limit	Action Level	Equipment (pump & sampling media)
Particulates not otherwise regulated, respirable dust	5 mg/m <sup>3</sup>	NA	NA	NA	SKC sample pump and cassette and 10 mm cyclone
Silica, crystalline quartz, respirable dust (OH 690 Silica in Construction)	0.05 mg/m <sup>3</sup>	NA	NA	0.025 mg/m <sup>3</sup>	SKC sample pump and cassette and 10 mm cyclone

Identification/Description	Time	Contaminant	Limit	Results	8 hr Calc. Exposure	Exposure as % of limit	Note
<u>31827</u> - Breathing zone sample of <b>Michael Grijalba</b> , cutting hollow concrete (Kerkstra w740% sand) with concrete saw, outside in yard with no engineering controls from 9:43 am – 11:43am (0.13 mg/m <sup>3</sup> calculated silica concentration during 50 min. of cutting). Wind approx. 12 mph. N-95 dust mask respirator worn. No other dust exposure during shift.	9:43 am – 11:43 am (120 minutes)	Respirable dust Silica, crystalline quartz	5 mg/m <sup>3</sup> 0.05 mg/m <sup>3</sup>	0.71 mg/m <sup>3</sup> <b>0.054 mg/m<sup>3</sup></b>	0.18 mg/m <sup>3</sup> <b>0.014 mg/m<sup>3</sup></b>	4 % <b>27 %</b>	1 1
<u>31825</u> - Breathing zone sample of <b>Phil Taylor</b> , drilling solid concrete (vertically) outside in yard with no engineering controls. Wind approx. 12 mph. N-95 dust mask respirator worn.	9:45 am – 11:45 am (120 minutes)	Respirable dust Silica, crystalline quartz	5 mg/m <sup>3</sup> 0.05 mg/m <sup>3</sup>	ND<0.2 mg/m <sup>3</sup> ND<0.025 mg/m <sup>3</sup>	<0.05 mg/m <sup>3</sup> <0.006 mg/m <sup>3</sup>	<15 % <12 %	1 1
<u>31809</u> - Breathing zone sample of <b>Phil Taylor</b> , drilling solid concrete (horizontally) outside in yard with no engineering controls. Wind approx. 12 mph. N-95 dust mask respirator worn.	10:22 am – 11:52 am (90 minutes)	Respirable dust Silica, crystalline quartz	5 mg/m <sup>3</sup> 0.05 mg/m <sup>3</sup>	ND<0.3 mg/m <sup>3</sup> ND<0.033 mg/m <sup>3</sup>	<0.06 mg/m <sup>3</sup> <0.006 mg/m <sup>3</sup>	<14 % <12 %	1 1

Note 1: Employee exposure does not exceed the limit.

Note 2: Employee exposure exceeds the MIOSHA Occupational Exposure to Respirable Crystalline Silica

TWA (Time-Weighted Average) = exposure limit averaged over an 8-hour period  
 STEL ( Short-Term Exposure Limit) = averaged over a 15-minute period  
 C (Ceiling) = exposure limit not to be exceeded during any part of the workday  
 AL (Action Level) = exposure limit averaged over an 8-hour period  
 Results = average exposure concentration during the sample period  
 Exposure = employee' s exposure; compare it to the type of limit

E<sub>m</sub> = exposure for mixture: see R325.51104  
 E<sub>m</sub> shall not exceed 1  
 > = greater than  
 < = less than  
 NA = not applicable  
 ND = none detected

ppm = parts per million  
 ppb = parts per billion  
 µg/m<sup>3</sup> = micrograms per cubic meter  
 mg/m<sup>3</sup> = milligrams per cubic meter  
 f/cc = fibers per cubic centimeter

Sheet A #2	<b>AIR CONTAMINANT DATA SHEET</b>		Department of Licensing and Regulatory Affairs Michigan Occupational Safety & Health Administration Consultation Education & Training Division  <b>IH:</b> Harvey Johnson, CIH
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