

Air Sampling Report

March 15, 2017

Respirable Dust and Crystalline Silica Exposure While Dry Cutting Concrete and Masonry Materials Utilizing Engineered Controls for Dust Collection

Air samples collected by:

iQ Power Tools
P.O. Box 7449
Moreno Valley, CA 92552
Telephone: (888) 274-7744
www.iqpowertools.com

Analytical report performed by:

ALS Global Environmental Laboratory
960 West LeVoy Drive, Salt Lake City UT 84123
Telephone 801-268-9992
www.alsglobal.com

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Cutting Concrete Masonry Units with a 20" Stationary Masonry Saw (Air Sampling on the operator)

Test # iQ2000-030917-125844

Test: To measure the tool operators total respirable and crystalline silica dust exposure.

Work Process: Cutting the listed concrete/masonry materials.

Frequency: Typical number of cuts made by a tool operator 25—200 cuts per 8 hour day.

Material: 8x8x16 concrete masonry unit (CMU) ASTM C90 spec. US market > 1 billion annually.

Use: A typical concrete product used throughout the US to construct commercial and industrial buildings, site walls, retaining walls.

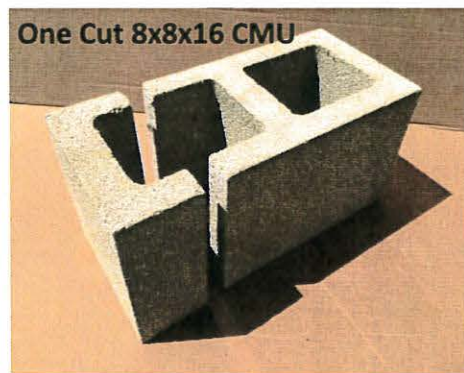
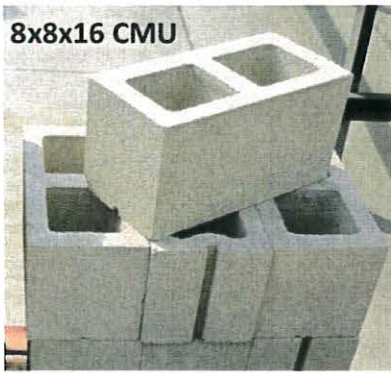
Cutting Equipment: MK 5009G 20" gas masonry saw for materials up to 8" high, 8" wide and 24" long.

Dust Collection Equipment: iQ2013G Dust Collection Vacuum 13 hp gas stationary saw and iQT20 20" Saw Dust Collection Table

Number of Cuts Made: 200 thru both the face shells of an 8x8x16 concrete masonry unit (CMU).

Air Sampling Location and Duration: In saw operator's breathing zone for 480 min.

Sample information: Lab Sample ID# 1707204001, March 09, 2017.



Testing Laboratory: ALS Global Environmental Laboratory, 960 West LeVoy Drive, Salt Lake City UT 84123

ALS Analytical Results: Sample ID 1707204001

Sample ID: iQ2000-030917-125844		Collected: 03/09/2017			
Lab ID: 1707204001		Received: 03/13/2017			
Method: NIOSH 0600 Mod., MW PVC Filter		Media: PVC Filter			
Sampling Info: Air Volume 1320 L		Analyzed: 03/14/2017 (186888)			
Analyte	Result (mg/sample)	Result (mg/m ³)	RL (mg/sample)		
Respirable Dust	0.26	0.19	0.020		
Method: NIOSH 7500 Mod.		Media: PVC Filter			
Sampling Info: Air Volume 1320 L		Analyzed: 03/15/2017 (186965)			
Analyte	Result (mg/sample)	Result (ug/m ³)	Result (%)	LOD (mg/sample)	RL (mg/sample)
Quartz	0.038	29	15	0.010	0.030

Monitoring and Analysis Methods

The air samples were collected at iQ Power Tools, 4635 Wade Avenue, Perris, CA, 92571 on one iQ Power Tools employee on March 9th, 2017 during concrete masonry dry cutting activities. The air samples were collected using SKC Brand of AirCheck Touch air sampling pumps on pre-weighted 3-piece matched weight 37 mm PVC filter media and SKC GS-3 plastic cyclones (SKC Part # 225 -100) at a flow rate of 2.75 liters per minute (LPM). The air sampling flow rate was pre-calibrated and post calibrated with a SKC Checkmate calibrator (part # SKC 375-07550N). Analysis was conducted at an AIHA accredited laboratory, ALS Laboratory in Salt Lake City, Utah for the analysis of respirable dust and silica. The test was conducted in accordance with current OSHA regulations. The analysis was completed using National Institute of Occupational Safety and Health (NIOSH) method 0600 and method 7500.

Cutting Concrete Paver with a 14" Masonry Saw (Air Sampling on the operator)

Test # iQ360x-030817-125847

Test: To measure the tool operator's total respirable and crystalline silica dust exposure.

Work Process: Cutting the listed concrete/masonry materials.

Frequency: Typical number of cuts made by a tool operator 25—200 cuts per 8 hour day.

Material: Manufactured Concrete Paver 4"x8" Unit—US market > 100 million annually.

Use: A typical concrete product used throughout the US to construct residential and commercial projects.

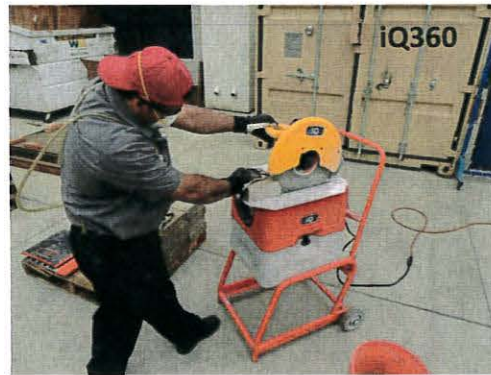
Cutting Equipment: iQ360x electric masonry 14" saw for materials up to 5" high, 12" wide and 12" long.

Dust Collection Equipment: iQ360x 14" masonry saw with integrated vacuum, filter and dust containment system.

Number of Cuts Made: 200 thru cuts in material size 2.25" thick by 4" wide by 8" long

Air Sampling Location and Duration: In saw operator's breathing zone for 480 min.

Sample information: Lab Sample ID# 1707204002 March 08, 2017



Testing Laboratory: ALS Global Environmental Laboratory, 960 West LeVoy Drive, Salt Lake City UT 84123
ALS Analytical Results: Sample ID 1707204002

Sample ID: iQ360x-030817-125847		Collected: 03/08/2017			
Lab ID: 1707204002		Received: 03/13/2017			
Method: NIOSH 0600 Mod., MW PVC Filter		Media: PVC Filter	Analyzed: 03/14/2017 (186888)		
		Sampling Info: Air Volume 1320 L			
Analyte	Result (mg/sample)	Result (mg/m ³)	RL (mg/sample)		
Respirable Dust	0.27	0.21	0.020		
Method: NIOSH 7500 Mod.		Media: PVC Filter	Analyzed: 03/15/2017 (186965)		
		Sampling Info: Air Volume 1320 L			
Analyte	Result (mg/sample)	Result (ug/m ³)	Result (%)	LOD (mg/sample)	RL (mg/sample)
Quartz	0.036	27	13	0.010	0.030

Monitoring and Analysis Methods

The air samples were collected at iQ Power Tools, 4635 Wade Avenue, Perris, CA, 92571 on one iQ Power Tools employee on March 8th, 2017 during concrete masonry dry cutting activities. The air samples were collected using SKC Brand of AirCheck Touch air sampling pumps on pre-weighted 3-piece matched weight 37 mm PVC filter media and SKC GS-3 plastic cyclones (SKC Part # 225-100) at a flow rate of 2.75 liters per minute (LPM). The air sampling flow rate was pre-calibrated and post calibrated with a SKC Checkmate calibrator (part # SKC 375-07550N). Analysis was conducted at an AIHA accredited laboratory, ALS Laboratory in Salt Lake City, Utah for the analysis of respirable dust and silica. The test was conducted in accordance with current OSHA regulations. The analysis was completed using National Institute of Occupational Safety and Health (NIOSH) method 0600 and method 7500.

Cutting Concrete Masonry Units with a 12" Hand Held Saw (Air Sampling on the operator)

Test # PC912v-030817-125876

Test: To measure the tool operators total respirable and crystalline silica dust exposure.

Work Process: cutting the listed concrete/masonry materials.

Frequency: Typical number of cuts made by a tool operator 25—100 cuts per 8 hour day.

Material: 8x8x16 concrete masonry unit (CMU) ASTM C90 spec. US market > 1 billion annually.

Use: A typical concrete product used throughout the US to construct commercial and industrial buildings, site walls, retaining walls.

Cutting Equipment: iQPC912v 12" Gasoline power cutter

Dust Collection Equipment: iQPC912v Gasoline power cutter with integrated vacuum, filter, and dust containment system.

Number of Cuts Made: 100 cuts thru the face shells of an 8x8x16 concrete masonry unit (CMU).

Air Sampling Location and Duration: In saw operator's breathing zone for 480 min.

Sample information: Lab Sample ID# 1707204003 March 08, 2017.



Testing Laboratory: ALS Global Environmental Laboratory, 960 West LeVoy Drive, Salt Lake City UT 84123

ALS Analytical Results: Sample ID 1707204003

Sample ID: PC912v-030817-125876		Collected: 03/08/2017			
Lab ID: 1707204003		Received: 03/13/2017			
Method: NIOSH 0600 Mod., MW PVC Filter		Media: PVC Filter			
Sampling Location: Tool Testing		Analyzed: 03/14/2017 (186888)			
Sampling Info: Air Volume 1320 L					
Analyte	Result (mg/sample)	Result (mg/m³)	RL (mg/sample)		
Respirable Dust	0.058	0.044	0.020		
Method: NIOSH 7500 Mod.		Media: PVC Filter			
Analyzed: 03/15/2017 (186965)		Sampling Info: Air Volume 1320 L			
Analyte	Result (mg/sample)	Result (ug/m³)	Result (%)	LOD (mg/sample)	RL (mg/sample)
Quartz	<0.010	<7.6	<17	0.010	0.030

Monitoring and Analysis Methods

The air samples were collected at iQ Power Tools, 4635 Wade Avenue, Perris, CA, 92571 on one iQ Power Tools employee on March 8th, 2017 during concrete masonry dry cutting activities. The air samples were collected using SKC Brand of AirCheck Touch air sampling pumps on pre-weighted 3-piece matched weight 37 mm PVC filter media and SKC GS-3 plastic cyclones (SKC Part # 225-100) at a flow rate of 2.75 liters per minute (LPM). The air sampling flow rate was pre-calibrated and post calibrated with a SKC Checkmate calibrator (part # SKC 375-07550N). Analysis was conducted at an AIHA accredited laboratory, ALS Laboratory in Salt Lake City, Utah for the analysis of respirable dust and silica. The test was conducted in accordance with current OSHA regulations. The analysis was completed using National Institute of Occupational Safety and Health (NIOSH) method 0600 and method 7500.

Appendix "A"



ANALYTICAL REPORT

Workorder: **34-1707204**

Client Project ID: Tool Testing 030917

Purchase Order: Tool Testing

Project Manager: Paul Pope

General Lab Comments

The results provided in this report relate only to the items tested.
 Samples were received in acceptable condition unless otherwise noted.
 Samples have not been blank corrected unless otherwise noted.
 This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ANAB (DoD ELAP)	ADE-1420	http://www.anab.org/accredited-organizations/
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labtmp/
	Nevada	UTD0009	http://ndep.nv.gov/bsdwlabservice.htm
	Oklahoma	UTD0009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/insideDNR/RegulatoryWater.aspx
	Texas (TNI)	T1047D4456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
	Washington	C596-16	http://www.ecy.wa.gov/programs/eap/labs/index.html
Industrial Hygiene	Kansas	E-10416	http://www.kdheks.gov/lpo/index.html
	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:	Washington	C596-16	http://www.ecy.wa.gov/programs/eap/labs/index.html
	CPSC	ANAB (ISO 17025, CPSC)	ADE-1420
Soil, Dust, Paint, Air	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
	Dietary Supplements	ACLASS (ISO 17025)	ADE-1420

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.

LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.

ND = Not Detected, Testing result not detected above the LOD or LOQ.

NA = Not Applicable.

** No result could be reported, see sample comments for details.

< This testing result is less than the numerical value.

() This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.