



EHL IH #

INDUSTRIAL HYGIENE DATA SHEET

PERSONAL SAMPLING

WORKS WENATCHEEBUILDING 47 LOCATION/PROCESS BASIN REPAIR DATE 80-09-23SAMPLE NO. 1 ANALYSIS FOR ASBESTOS IN MARINITEEMPLOYEE NAME Room Air CLOCK # _____ SOC. SEC. # _____

JOB CLASSIFICATION _____

COLLECTING MEDIUM 37mm AAPUMP IDENTIFICATION 2451 FLOW RATE _____ MINUTE (Stroke) _____ COUNTER FINISH _____TIME OF SAMPLING 1405 TO 1418 DURATION 30 MIN. COUNTER START _____TOTAL AIR VOLUME 60,000 mL SAMPLING STROKES _____

NOTES: (Environmental, Operating Practices, Personal Protection
Used, Instrumentation, etc.)

SYSTEM CHECK

EXHAUST FAN NOT ON!

ANALYTICAL DATA AND CALCULATIONS

$$\text{No. of fibers/mL} = \frac{120 \times 275,806}{60,000}$$

CONCENTRATION 5.5 fibers/mL

std. of 2 fibers/mL 11

STD 10 fibers/cc Ceiling

SAMPLED BY _____

ANALYZED BY _____

CHECKED BY _____

WENS 009997



EHL IH #

INDUSTRIAL HYGIENE DATA SHEET

PERSONAL SAMPLING

WORKS WENATCHEEBUILDING 47 LOCATION/PROCESS BASIN REPAIR DATE 80-09-23SAMPLE NO. 2 ANALYSIS FOR ASBESTOS IN MARINITEEMPLOYEE NAME R. F. WEIDON CLOCK # 21131 SOC. SEC. # 517-30-6419JOB CLASSIFICATION BRICKMASONCOLLECTING MEDIUM 37mm AAPUMP IDENTIFICATION 2952 FLOW RATE 2.1 MINUTE ~~(Stroke)~~ COUNTER FINISHTIME OF SAMPLING 14:50 TO 15:00 DURATION 20 MIN. COUNTER STARTTOTAL AIR VOLUME 40,000 mL SAMPLING STROKESNOTES: (Environmental, Operating Practices, Personnel Protection
Used, Instrumentation, etc.)

SYSTEM CHECK

NO EXHAUST FAN - COVERING AREA of WORK
BY JACK HAMMER

EXHAUST FAN WAS NOT TURNED ON!

Sample Time split due to removal of backplate by General
mechanic. Cassette covered during this time delay.

Respirators worn at all times

ANALYTICAL DATA AND CALCULATIONS

CONCENTRATION 6.9 fibers/mL

$$\text{No. of fibers/mL} = \frac{1.00 \times 275,806}{40,000}$$

SAMPLED BY _____

ANALYZED BY _____

CHECKED BY _____

WENS 009998



INDUSTRIAL HYGIENE DATA SHEET

PERSONAL SAMPLING

WORKS WENATCHEEBUILDING 47 LOCATION/PROCESS Basin Repair DATE 8-09-23SAMPLE NO. 3 ANALYSIS FOR ASBESTOS IN MARINITEEMPLOYEE NAME J.C. DOREY CLOCK # 21126 SOC. SEC. # 536-40-7741JOB CLASSIFICATION BRICK MASONCOLLECTING MEDIUM 37 mm AAPUMP IDENTIFICATION 2469 FLOW RATE 2 l MINUTE (Stroke) COUNTER FINISH _____TIME OF SAMPLING 1453:30 TO 1508:30 DURATION 15 MIN. COUNTER START _____TOTAL AIR VOLUME 30,000 mL SAMPLING STROKES _____NOTES: (Environmental, Operating Practices, Personal Protection
Used, Instrumentation, etc.)

SYSTEM CHECK

100% of area of work
Exhaust Fan was not turned on!

Respirators worn at all times

ANALYTICAL DATA AND CALCULATIONS

CONCENTRATION 9.2 fibers/mL

$$\text{No. of fibers/mL} = \frac{1.00 \times 275,800}{30,000}$$

SAMPLED BY _____

ANALYZED BY _____

CHECKED BY _____

WENS 009999



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INDUSTRIAL HYGIENE DATA SHEET
PERSONAL SAMPLING

WORKS WENATCHEE

BUILDING 47 LOCATION/PROCESS BASIN REPAIR DATE 80-09-23

SAMPLE NO. 4 ANALYSIS FOR ASBESTOS IN MARINITE

EMPLOYEE NAME R.F. WELDON CLOCK # 21131 SOC. SEC. # _____

JOB CLASSIFICATION BRICK MASON

COLLECTING MEDIUM 32 mm AA

PUMP IDENTIFICATION 2952 FLOW RATE 2.1 MINUTE (Stroke) COUNTER FINISH _____

TIME OF SAMPLING 1500 TO 1515 DURATION 15 MIN. COUNTER START _____

TOTAL AIR VOLUME 30,000 mL SAMPLING STROKES _____

NOTES: (Environmental, Operating Practices, Personal Protection
Used, Instrumentation, etc.)

SYSTEM CHECK

Exhaust FAN Not operating

ANALYTICAL DATA AND CALCULATIONS

$$\text{No. of fibers/mL} = \frac{3.25 \times 275,506}{30,000}$$

CONCENTRATION 29.9 fibers/mL

SAMPLED BY _____

ANALYZED BY _____

CHECKED BY _____

WENS 010000

BASIN REPAIR 80 Sept. 23

Sample	1/11	2/12	3/13	4/14	5/15	6/16	7/17	8/18	9/19	10/20
<u>1</u>	1	0	1	0	2	1	1	2	2	0
<u>0</u>	0	1	1	2	3	3	1	0	1	2
Total Count =	24									
AV Count =	1.20									
<u>2</u>	1	1	1	1	1	0	4	1	0	1
<u>0</u>	0	0	1	0	1	1	0	0	4	2
Total Count =	20									
AV Count =	1.00									
<u>3</u>	2	2	0	1	1	0	2	3	0	1
<u>3</u>	3	0	1	1	0	1	1	0	1	0
Total Count =	20									
AV Count =	1.00									
<u>4</u>	2	1	4	1	5	2	7	3	3	1
<u>3</u>	3	1	3	1	5	3	5	5	5	5
Total Count =	65									
AV Count =	3.25									



EHL 111 #

INDUSTRIAL HYGIENE DATA SHEET

PERSONAL SAMPLING

WORKS Wenatchee WorksBUILDING 47 LOCATION/PROCESS MARINITE - Repair Trough DATE 79-06-21SAMPLE NO. 1 (#6) ANALYSIS FOR AsbestosEMPLOYEE NAME Room Air CLOCK # _____ SOC. SEC. # _____

JOB CLASSIFICATION _____

COLLECTING MEDIUM AAWP 03700 MembranePUMP IDENTIFICATION _____ FLOW RATE 1.8 LPM MINUTE (Stroke) COUNTER FINISH _____TIME OF SAMPLING 1215 TO 1445 DURATION 150 MIN. COUNTER START _____TOTAL AIR VOLUME 270,000 mls SAMPLING STROKES _____NOTES: (Environmental, Operating Practices, Personal Protection
Used, Instrumentation, etc.)

SYSTEM CHECK

$$Av. conc. / 20 fields = 0.75$$
$$No. of Airborne Asbestos fibers/ml = \frac{0.75 \times 275,806}{270,000 mls}$$

Conditions apply to all test on this date -

1. All doors closed
2. Exhaust fan Not running during work except to turn on to vacuum small particles in bottom of trough after major portion was scooped out with brush + pan.
3. Face mask worn at all times

ANALYTICAL DATA AND CALCULATIONS

CONCENTRATION 0.8 / ML

WENS 010002

SAMPLED BY PWCANALYZED BY PWC

CHECKED BY _____



EHLH#

INDUSTRIAL HYGIENE DATA SHEET

PERSONAL SAMPLING

WORKS Wenatchee WorksBUILDING 47 LOCATION/PROCESS Marinite - Repair Trough DATE 79-06-21SAMPLE NO. 2 (#7) ANALYSIS FOR AsbestosEMPLOYEE NAME M. Faulkner CLOCK # _____ SOC. SEC. # _____JOB CLASSIFICATION Brick MasonCOLLECTING MEDIUM AAW P03700 MembranePUMP IDENTIFICATION _____ FLOW RATE 18 LPM MINUTE (Stroke) COUNTER FINISH 62210TIME OF SAMPLING 1233 TO 1248 DURATION 15 MIN. COUNTER START 61300TOTAL AIR VOLUME 27,000 mls SAMPLING STROKES 910NOTES: (Environmental, Operating Practices, Personnel Protection
Used, Instrumentation, etc.)

SYSTEM CHECK

$$Av. Count / 20 fields = 2.35$$
$$No. of Airborne Asbestos fibers/ml: \frac{2.35 \times 275,806}{27,000 \text{ mls}}$$

ANALYTICAL DATA AND CALCULATIONS

CONCENTRATION 24.0 / ml

WENS 010003

SAMPLED BY PHCANALYZED BY PHC

CHECKED BY _____



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INDUSTRIAL HYGIENE DATA SHEET

PERSONAL SAMPLING

WORKS Wenatchee WorksBUILDING 47 LOCATION/PROCESS NARINITE - Repair Trough DATE 7-06-21SAMPLE NO. 3 (#8) ANALYSIS FOR AsbestosEMPLOYEE NAME L. Reynolds CLOCK # _____ SOC. SEC. # _____JOB CLASSIFICATION BRICK MASONCOLLECTING MEDIUM AAW P03700 MembranePUMP IDENTIFICATION _____ FLOW RATE 1.8 LPM MINUTE (Stroke) COUNTER FINISH 59388TIME OF SAMPLING 1233 TO 1248 DURATION 15 MIN.COUNTER START 58455TOTAL AIR VOLUME 27,000 mLSAMPLING STROKES 933NOTES: (Environmental, Operating Practices, Personal Protection
Used, Instrumentation, etc.)

SYSTEM CHECK

$$AV. Count / 20 fields = 1.25$$
$$No. of Airborne Asbestos fibers/mL = \frac{1.25 \times 275,806}{27,000 \text{ mL}}$$

ANALYTICAL DATA AND CALCULATIONS

CONCENTRATION 12.8/mL

WENS 010004

SAMPLED BY pkcANALYZED BY pkc

CHECKED BY _____



EHL 111#

INDUSTRIAL HYGIENE DATA SHEET

PERSONAL SAMPLING

WORKS Wenatchee WorksBUILDING 47 LOCATION/PROCESS MARINTAS - Repair Trough DATE 79-06-21SAMPLE NO. 4 (#9) ANALYSIS FOR AsbestosEMPLOYEE NAME Mike Faulkner CLOCK # _____ SOC. SEC. # _____JOB CLASSIFICATION BRICK MASONCOLLECTING MEDIUM AAWP03700 MembranePUMP IDENTIFICATION _____ FLOW RATE 18 LPM MINUTE (Stroke) COUNTER FINISH 63125TIME OF SAMPLING 1249 TO 1304 DURATION 15 MIN. COUNTER START 62210TOTAL AIR VOLUME 27,000 mLs SAMPLING STROKES 915NOTES: (Environmental, Operating Practices, Personnel Protection
Used, Instrumentation, etc.)

SYSTEM CHECK

AV. Count / 20 fields = 1.45

$$\text{No of Airbourne Asbestos fibers/mL} = \frac{1.45 \times 275,806}{27,000 \text{ mLs}}$$

ANALYTICAL DATA AND CALCULATIONS

CONCENTRATION 14.8 / mL

WENS 010005

SAMPLED BY PACANALYZED BY P. K. P. P.

CHECKED BY _____



EHL IH #

INDUSTRIAL HYGIENE DATA SHEET

PERSONAL SAMPLING

WORKS Wenatchee WorksBUILDING 47 LOCATION/PROCESS MARINITE-REPAIR TROUGH DATE 79-06-21SAMPLE NO. 5 (#10) ANALYSIS FOR AsbestosEMPLOYEE NAME Louie Reynolds CLOCK # _____ SOC. SEC. # _____JOB CLASSIFICATION Brick MasonCOLLECTING MEDIUM AAWPO3700 membranePUMP IDENTIFICATION _____ FLOW RATE 1.8 LPM MINUTE (Stroke) COUNTER FINISH 60328TIME OF SAMPLING 1249 TO 1304 DURATION 15 MIN. COUNTER START 59388TOTAL AIR VOLUME 27,000 SAMPLING STROKES 940NOTES: (Environmental, Operating Practices, Personal Protection
Used, Instrumentation, etc.)

SYSTEM CHECK

AV. Count / 20 fields = 105

$$\text{No. of Airborne Asbestos fibers/mL} = \frac{105 \times 275,806}{27,000 \text{ mL}}$$

ANALYTICAL DATA AND CALCULATIONS

CONCENTRATION 10.7 / mL

WENS 010006

SAMPLED BY [Signature]ANALYZED BY [Signature]

CHECKED BY _____

MARINITE		1979 June 21									
	1	2	3	4	5	6	7	8	9	10	
#1	3	1	1	1	1	0	0	0	3	2	
	0	0	0	0	1	0	1	0	0	1	
	$\frac{T}{20} = \frac{15}{20} = 0.75$										
#2	3	2	4	3	1	0	2	5	2	2	
	1	5	1	2	1	2	2	4	2	2	
	$\frac{47}{20} = 2.35$										
#3	5	1	0	0	1	1	2	1	0	0	
	1	1	3	1	1	0	2	2	2	1	
	$\frac{25}{20} = 1.25$										
#4	3	1	1	1	1	2	2	1	0	2	
	1	1	0	0	3	1	1	3	3	2	
	$\frac{29}{20} = 1.45$										
#5	2	3	1	0	0	1	0	0	0	3	
	0	1	0	2	1	3	0	1	2	1	
	$\frac{21}{20} = 1.05$										

WENS 010007

WENS 010007

ALUMINUM COMPANY OF AMERICA

Wenatchee

LABORATORY

REPORT TO <u>H. F. Hillegass</u>	DATE <u>7-9-62</u>	REPORT NO.
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SAMPLE OF MARINITE DUST

RECEIVED FROM P.W.C.

COPIES TO

DESCRIPTION Repair of Trough containing MARINITE Board
Sample Date 79 June 21
Room Air Sample Time from 1215 to 1445 hours
Sample Time on Personnel from 1233 to 1304 hours

Some break down shortly before lunch Period
(about 15 mins). Major work did not start
until 1233 hours till end of day.

Sampling conditions:

1. All doors closed.
2. Exhaust Fan Not Running during
work except the use of a 2" hose to
vacuum small particles in bottom of
Trough after major portion was scooped
out with dust pan. This use of EXHAUST
fan was not more than 2 minute duration.

<u>Sample No</u>	<u>Name</u>	<u>Airbourne Asbestos Fiber/mL</u>
<u>1</u>	<u>(Room Air)</u>	<u>0.8</u>
<u>2</u>	<u>M. Faulkner</u>	<u>24.0</u>
<u>3</u>	<u>L. Reynolds</u>	<u>12.8</u>
<u>4</u>	<u>M. Faulkner</u>	<u>14.8</u>
<u>5</u>	<u>L. Reynolds</u>	<u>10.7</u>

P.W. Curtis

ALUMINUM COMPANY OF AMERICA

Wana Lake

LABORATORY

REPORT TO <u>H.F. Hillegass</u>	DATE <u>79-09-21</u>	REPORT NO.
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SAMPLE OF MARINITE

RECEIVED FROM

COPIES TO

DESCRIPTION Ingot Plant Aluminum Metal Trough Repair
Sampled 79-09-10
Sampled closed face on cassette

Sample No	No. of fibers/mL
1	4.7
2	7.9
3	10.9
4 (Room P.R.)	0.4

R.W. Curtis



EHL 114

INDUSTRIAL HYGIENE DATA SHEET

PERSONAL SAMPLING

WORKS WentzlerBUILDING 47 LOCATION/PROCESS NATURALITE - TRAILER DATE 7-9-10SAMPLE NO. 1 (6) ANALYSIS FOR AsbestosEMPLOYEE NAME Mike Faulkner CLOCK # 2112 SOC. SEC. # _____

JOB CLASSIFICATION _____

COLLECTING MEDIUM _____

PUMP IDENTIFICATION 1 FLOW RATE 1.74 LPM MINUTE (Stroke) 64 COUNTER FINISH 46700TIME OF SAMPLING 0745 TO 0800 DURATION 15 MIN. COUNTER START 45725TOTAL AIR VOLUME 26.5 Liters SAMPLING STROKES 975NOTES: (Environmental, Operating Practices, Personal Protection
Used, Instrumentation, etc.)

SYSTEM CHECK

Closed face

ANALYTICAL DATA AND CALCULATIONS

CONCENTRATION 4.7 = of fibers/mL

$$\frac{\# \text{ of fibers}}{\# \text{ of fields}} = \frac{9}{20} = 0.45$$

$$\frac{0.45 \times 275,806}{26,500 \text{ mL}} = 4.7$$

WENS 010010

SAMPLED BY M.C.ANALYZED BY M.C.

CHECKED BY _____



EHL 117

INDUSTRIAL HYGIENE DATA SHEET

PERSONAL SAMPLING

WORKS WenatcheeBUILDING 47 LOCATION/PROCESS Marinite - Trough Repair DATE 79-09-10SAMPLE NO. 2 (7) ANALYSIS FOR AsbestosEMPLOYEE NAME Lewis Reynolds CLOCK # 21127 SOC. SEC. # _____

JOB CLASSIFICATION _____

COLLECTING MEDIUM _____

PUMP IDENTIFICATION 2 FLOW RATE 1.62 LPM MINUTE (Stroke) 66 COUNTER FINISH 84170TIME OF SAMPLING 746 TO 0807 DURATION 21 MIN. COUNTER START 82825TOTAL AIR VOLUME 33.0 Liters SAMPLING STROKES 1345

NOTES: (Environmental, Operating Practices, Personal Protection
Used, Instrumentation, etc.)

SYSTEM CHECK

closed face

ANALYTICAL DATA AND CALCULATIONS

CONCENTRATION 7.9 # of fibers/mL

$$\frac{\# \text{ of fibers}}{\# \text{ of fields}} = \frac{19}{20} = 0.95$$

$$\frac{0.95 \times 275,806}{33,000 \text{ mL}} = 7.9$$

WENS 010011

SAMPLED BY JUCANALYZED BY JUC

CHECKED BY _____



EHL IH #

INDUSTRIAL HYGIENE DATA SHEET

PERSONAL SAMPLING

WORKS WewatcheeBUILDING 47 LOCATION/PROCESS Marinite-Trough Repair DATE 7-9-09SAMPLE NO. 3 (9) ANALYSIS FOR asbestosEMPLOYEE NAME Mike Faulkner CLOCK # _____ SOC. SEC. # _____

JOB CLASSIFICATION _____

COLLECTING MEDIUM _____

PUMP IDENTIFICATION 1 FLOW RATE 1.74 LPM 6.4 MINUTE (Stroke) COUNTER FINISH 49627TIME OF SAMPLING 0800 TO 0815 DURATION 15 MIN. COUNTER START 46700TOTAL AIR VOLUME 25.2 Liters SAMPLING STROKES 927NOTES: (Environmental, Operating Practices, Personal Protection
Used, Instrumentation, etc.)

SYSTEM CHECK

closed face

ANALYTICAL DATA AND CALCULATIONS

CONCENTRATION 10.9 # of f. bers/ml

$$\frac{\# \text{ of fiber}}{\# \text{ of fields}} = \frac{20}{20} = 1.00$$

$$\frac{1.00 \times 275,806}{25,200 \text{ ml}} = 10.9$$

WENS 010012

SAMPLED BY JWCANALYZED BY JWC

CHECKED BY _____



EHL TH #

INDUSTRIAL HYGIENE DATA SHEET

PERSONAL SAMPLING

WORKS WenatcheeBUILDING 47 LOCATION/PROCESS Marinite - Trough/Repair DATE 79-09-10SAMPLE NO. 4 (8) ANALYSIS FOR asbestosEMPLOYEE NAME Room Air CLOCK # _____ SOC. SEC. # _____

JOB CLASSIFICATION _____

COLLECTING MEDIUM _____

PUMP IDENTIFICATION 3 FLOW RATE 1.72 LPM MINUTE (Stroke) 46 COUNTER FINISH 95685TIME OF SAMPLING 750 TO 0835 DURATION 35 MIN. COUNTER START 93610TOTAL AIR VOLUME 77.6 liters SAMPLING STROKES 2075NOTES: (Environmental, Operating Practices, Personal Protection
Used, Instrumentation, etc.)

SYSTEM CHECK

closed face

ANALYTICAL DATA AND CALCULATIONS

CONCENTRATION 0.4 # of fibers/ml

$$\frac{\# \text{ of fibers}}{\# \text{ of fields}} = \frac{2}{20} = 0.10$$

$$\frac{0.10 \times 275,806}{77,600 \text{ mls}} = 0.4$$

WENS 010013

SAMPLED BY AWC

ANALYZED BY _____

CHECKED BY _____

Station Date Count →

1 (6)	79-09-10	1	-	-	-	1	1	1	1	1	1
		-	1	-	-	-	-	-	1	1	-
Ave Count =		9/20 =		0.45							
2 (7)	79-09-10	1	2	2	-	1	1	-	3	-	-
		1	1	1	1	1	1	1	1	1	-
Ave Count =		19/20 =		0.95							
3 (9)	79-09-10	1	1	2	1	-	2	1	-	-	-
		2	-	1	1	1	1	-	1	1	4
Ave Count =		20/20 =		1.00							
4 (8)	79-09-10	1	-	-	-	-	-	-	-	-	-
		-	-	-	1	-	-	-	-	-	-
Ave Count =		2/20 =		0.10							
5 (10)	79-09-13	-	-	-	-	-	-	-	1	1	1
		-	-	1	2	1	1	-	1	1	1
Ave Count =		11/20 =		0.55							
6 (6)	79-09-13	-	-	-	2	-	-	-	1	1	1
		4	-	-	1	-	1	-	1	-	-
Ave Count =		12/20 =		0.60							
7 (7)	79-09-13	-	2	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-
Ave Count =		2/20 =		0.10							

WENS 010014