FILE NAME: Railroads (RR)

DATE: 1981 July 29

DOC#: RR052

DOCUMENT DESCRIPTION: Memo with Unpublished Report & Sample Data Sheets - Air Quality in Engine Build-Up Shop



Jacksonville, Florida, July 29, 1981, MEB:jha

Charles A. Mead, M.D.
Chief Medical Officer

Subject: Air Quality in the Engine Build-Up Shop in Waycross

On July 22, 1981, a request was made by Mr. O.G. Wood, Waycross Shop Superintendent, to sample and evaluate air quality in the Engine Build-Up Shop. This request resulted from a complaint filed by the local machinist union. The primary concerns were asbestos exposure from gasket material and organic vapors from the solvent SCLI MD-8L.

The air sampling can be done at a cost of $750 to $850. This would provide the sampling media, extra pumps, and analysis. The analysis would be done by a certified industrial hygiene lab and is the major cost. These costs must be paid by Waycross Shop or Mechanical Department funds.

Due to the nature of this study, guidance is requested from Labor Relations, Mechanical, and Law Departments prior to any sampling being done.

Mark E. Badders

Mark E. Badders
Industrial Hygienist

7-22-81

REQUEST FOR ASSISTANCE FROM
O. G. WOOD, SHOP SUPT.

REGARDING FORMAL COMPLAINT FROM
MACHINIST UNION ABOUT AIR QUALITY
AND VENTILATION IN THE ENGINE
BUILD-UP SHOP
SUPERVISORS: MR. WILCOX
MR. CLARENCE BLOUNT

CLEANERS

3P	STEAM GUN + VAT
4P	HOT TANK CLEANER
5P	ALUMINUM CLEANER

DUSTS

ASBESTOS
METALIC PARTICULATES
INERT DUST

5 25 mg/m³

100 PPM
MW ≈ 130

SOLVENT

SCL MD-8L (PETROLEUM SOLVENTS)
RED — PO: 114924
~~BLUE — PO 109288~~
BLUE PO: 109285

HARMFUL VAPOR LABEL

VICCO CHEM

Abestos Gasket Material

8081380 -	Housing to C.C. —	Power Parts, Power Equipment
8081498 -	C. to Housing — —	DuRox
8081398 -	Aux. Gen. Drive — —	PP
8095027 -	Blower Sup. + C.C. —	PP
8098141 -	Cover to H. (12 cyl) —	DuRox
8185923 -	" " " (Geng.) —	PP
8175858 -	Oil Retainer — — —	DuRox
8451659 -	Cover to H. — — —	PP
8403484 -	Aftercooler — — —	PP
8416804 -	Air duct to CC	(645E3) Pump
8416803 -	" " " "	(645D) ELE.
8390072 -	soak back fitter	645E3-ELE
8289139 -	oil manifold	" " -O
8288155 -	" "	" " -O
8366330 -	" "	" " -DuRox
8366424 -	turbo filter	" " -DuRox
8366331	" "	" " -DuRox

A) Porter Hayden Co - Dan Doe — 804-798-9038
B) Power Parts - Jerry Nichols — 312-772-4600
C) Electro Motive - Milt Larson — 404-349-3300
D) Saban Industries - Mike Saban — 312-625-6244

Durox — Ed Rathman — 913-371-0707

WAB — Howard Nunday — 721-1299 (Monday

PF=F

3470795 — PP
3470796 — PP
" 97 — PP
" 98 — PP
" 99 — ELE
3470800 — ELE

Cyl. Head Support Frame Gaskets
(Wagon Body Gaskets)

328687 — Cyl. Test Valve Packing — SAB & ELE

507085 — Wagon Body To Back-End Housing — ELE

261173 — Front End Housing — O

329149 — Water Pump Gasket — PP
29467 — Oil Pump " (line) — DUROX
44742 — Over Speed Housing to Frame — PP
49444 — 12 cyl Oil Manifold — ELE & PP
47757 — Oil Pan Blank — — — PP
5988 — Tee Pipe Gasket — — — DUROX
20621 — water manifold — (front end) — ELE
2354 — jumper line (water) — — DUROX

Reconditioning Shop

8083581 — PP

8083579 — PP + DUROX

8337946 — PP (EMD

?204460 — PP + DUROX +

?3379 47 — PP + DUROX (POWER PARTS)

?59943?

?039110 — — — PP + DUROX

?159750 — — — PP + DUROX

?07251?

?145 93 — WAB + DUROX

?58251 — WAB + DUROX

?64866 — WAB + DUROX

?64861 — — WAB + DUROX

?58255 — WAB + DUROX

?58248 — WAB + DUROX

067253 — VICTOPAC (EMD OR POWER PARTS) PP + DUROX

?0— 6000005 — [illegible] (STORE HOUSE #) — POR

ENVIRONMENTAL HEALTH LABORATORY
P. O. Box 6195 / Macon, Georgia 31208
(912) 745-4702

No. 8180042

LABORATORY ANALYSIS REPORT

SAMPLE CONTAINER NO.	ANALYZED FOR	METHOD OF ANALYSIS	ANALYTICAL RESULTS
AA			fibers longer than 5 microns per cc
2542	Asbestos Fiber Count	NIOSH P&CAM 239; PCM	*
2544	"	"	0.19 **
2545	"	"	*
2546	"	"	0.073
2547	"	"	0.0097
2549	"	"	0.044
Blank 2550	"	"	no fibers detected in 100 porton reticle counting field.
Gasket Dust	Asbestos Identification	PLM	20% Chrysotile Asbestos 40% Cellulosic Fibers

SPECIAL REMARKS:

PCM = Phase Contrast Microscopy; 450 x magnification

PLM = Polarized Light Microscopy with Dispersion Staining at 100 x magnification.

Percentages given are visual estimates based on volume.

* The asbestos fiber count analysis could not be performed on samples 2542 and 2545 due to an excess of particulate matter on the filters.

** Sample 2544 contained heavy particulate material which may have obscured some of the fibers; therefore, results may be low.

CHEMIST Teresa Waters Kenneth A Bonly (Signature) DATE 8/25/81

ENVIRONMENTAL HEALTH LABORATORY
P. O. Box 6195 / Macon, Georgia 31208
(912) 745-4702

No. 81H0042

LABORATORY ANALYSIS REPORT

SAMPLE CONTAINER NO.	ANALYZED FOR	METHOD OF ANALYSIS	ANALYTICAL RESULTS
CT			mg/M^3
1	Mineral Spirits	GC	14
2	"	"	< 0.76
3	"	"	23
4	"	"	37
Blank	"	"	None Detected Detection Limit = 0.012mg.

SPECIAL REMARKS:

GC = Gas Chromatography; flame ionization detector

< = less than

CHEMIST M. Jerrell Cole (Signature) DATE 8/25/81

ENVIRONMENTAL HEALTH LABORATORY
P.O. Box 6195 / 1021 Georgia Avenue
Macon, Georgia 31208 / (912) 745-4702

REQUEST FOR ANALYTICAL SERVICES

RECEIVED
AUG 18 1981
E. H. LAB

FOR LABORATORY ONLY
Lab Report No.
[illegible]
☐ U.S. ☐ S.S.
Pol. or Con. No.

Customer Purchase Order No.
SEND TO M.E. BADGERS

Name of Company
FAMILY LIVE. RAIL SYSTEM

Street Address
500 WATER ST., MED. DEPT.

City, State, Zip
JACKSONVILLE, FL 32202

Person Collecting Samples
M.E. BADGERS

REPORT RESULTS TO

Name
MARK E. [illegible]

Company
FAMILY LINES RAIL SYST

Mailing Address
500 WATER ST, MED. DEPT

City, State, Zip
JACKSONVILLE, FL 32202

Phone
904-359-1500

Product Manufactured/Service Rendered
ANALYSIS OF SAMPLES

Sampling Methods
(1) NIOSH METHOD P&CAM 239

SAMPLE CONTAINER NO.	ANALYSIS DESIRED	NOTES (Record sampling date, location and operation, other compounds present, etc.)	SAMPLING RATE (liters/min)	SAMPLING TIME START	SAMPLING TIME END	AIR SAMPLE VOLUME
AA 2542	ASBESTOS FIBER COUNT	8-10-81, WATEROSS, BUFFING GASKET OF MACHINE PARTS, IRON OXIDE	2	1010	1142	184
AA 2544	"	"	2	1006	1136	220
AA 2545	"	"	2	0851	1035	208
AA 2546	"	"	2	0852	1038	212
AA 2547	"	"	2	1037	1157	160
AA 2549	"	"	2	1034	1158	158
AA 2550	"	"		BLANK		
GASKET DUST		BULK SAMPLE				

P-6854d Ptd. in U.S.A.

FILE COPY #1

ENVIRONMENTAL HEALTH LABORATORY
P.O. Box 6195 / 1021 Georgia Avenue
Macon, Georgia 31208 / (912) 745-4702

REQUEST FOR ANALYTICAL SERVICES

RECEIVED
AUG 18 1981
E. H. LAB

FOR LAB USE ONLY
Lab. Report No.
Bus. Bus.
Pol. or Com. No.

Customer Purchase Order No.
SEND TO M.E. BADDERS

Name of Company
FAMILY DINER RAIL SYSTEM

Street Address
500 WATER ST, MED. DEPT.

City, State, Zip
JACKSONVILLE, FL 32202

Person Collecting Samples
M.E. BADDERS

REPORT RESULTS TO

Name
MARK E. BADDERS

Company
FAMILY DINER RAIL SYSTEM

Mailing Address
500 WATER ST, MED. DEPT.

City, State, Zip
JACKSONVILLE, FL

Phone
904-359-1500

Product Manufactured/Service Rendered
ANALYSIS OF SAMPLES

Sampling Methods
YOUR METHOD, FOR MINERAL SPIRITS

SAMPLE CONTAINER NO.	ANALYSIS DESIRED	NOTES (Record sampling date, location and operation, other compounds present, etc.)	SAMPLING RATE (liters/min)	SAMPLING TIME START	SAMPLING TIME END	AIR SAMPLE VOLUME
1	G.C. ANALYSIS FOR MINERAL SPIRITS	8-10-81, WAYCROSS, GOVERNOR RM JOB, AREA SAMPLE	0.200	0949	1041	11.4
2	"	"	0.200	1042	1201	15.[illegible]
3	"	8-10-81, WAYCROSS, GOVERNOR ROOM JOB, PERSONNEL SAMPLE	0.200	1300	1404	12.2
4	"	"	0.200	1401	1503	12.4
5	"	BLANK				
MINERAL SPIRITS		BULK SAMPLE				

6854c Ptd. In U.S.A.

SAMPLING DATA SHEET

Date 9-17-81 Location WAYCROSS

Contaminant ASBESTOS

Employee/Social Security No. AREA SAMPLE

Location/Job Title 10' SE OF BUFFING AREA

Number of similarly exposed employees 10

Job Description

Sampling Apparatus BDX 44 Serial No. G-79-162

Sampling Medium AA 0.8 FILTER

Sample Number	Sample Period			Sampling Rate		Total Volume LITERS	Lab Number	Lab Resul	FIBERS/cc T.W.A.
	Start	Stop	Total (mins)	roto.	LPM				
AA 2546	0852	1036	106	2.4	2	212		0.073	0.073
AA 2549	1039	1158	79	2.4	2	158		0.044	0.044
AA 2550			BLANK						

Weather Conditions: HOT & HUMID

Ventilation: GENERAL

Respirator Used: Type:

Calibration Method Results:

Comments: SMOKE TUBE USED TO INDICATE DIRECTION OF AIR FLOW / DIRECTION AND SPEED VARIABLE.

Prepared by M. E. Baddley Date 8-11-81

SAMPLING DATA SHEET

Date 8-11-81 Location WAYCROSS

Contaminant AC. BF. SIO3

Employee/Social Security No. R.W. MUSGROVE / 169607

Location/Job Title FRONT END JOB / MACHINIST

Number of similarly exposed employees 3

Job Description REMOVE OLD GASKET & APPLY NEW GASKET

Sampling Apparatus MSA MODEL G Serial No. CC345-7

Sampling Medium AA 0.8 FILTER

Sample Number	Sample Period			Sampling Rate		Total Volume (Liters)	Lab Number	FIBERS/CC Lab Result	T.W.A. FIBERS/CC
	Start	Stop	Total (mins)	roto.	LPM				
AA 2545	0851	1035	104	6	2	208		ND	N.D. *
AA 2547	1037	1157	80	6	2	160		0.0097	0.0097

Weather Conditions: HOT & HUMID

Ventilation: GENERAL

Respirator Used: AVAILABLE & NOT USED Type: —

Calibration Method Results:

Comments: WORK IS ROTATED AMONG MEN ASSIGNED TO THIS AREA / SECOND FILTER NO BUFFING DONE BUT WORKED IN AREA AROUND BUFFING TABLE

Prepared by M.E. Baldwin Date 8-11-81

* HEAVY PARTICULATE LOAD

SAMPLING DATA SHEET

Date 8-10-81 Location WAYCROSS / ENG. BUILD UP

Contaminant ASBESTOS

Employee/Social Security No. ~~AE~~ H.C. TYRE, JR. / # 171960

Location/Job Title FRONT END JOE / MACHINIST

Number of similarly exposed employees 2

Job Description

Sampling Apparatus MSA MODEL G Serial No. CC248-7

Sampling Medium AA FILTER

Sample Number	Sample Period			Sampling Rate		Total Volume liters	Lab Number	Lab Result	T.W.A.
	Start	Stop	Total (mins)	roto.	LPM				
AA2542	1310	1442	92	10	2.0	184		(NOTE BELOW)	N.D.

Weather Conditions: HOT & HUMID

Ventilation: GENERAL

Respirator Used: WILLSON DUST MASK Type: DUST - MIST

Calibration Method Results:

Comments: OTHER EXPOSURE IRON OXIDE / TOO HEAVY CONC. OF PARTICULATE MATTER

Prepared by M. E. Badders Date 8-10-81

SAMPLING DATA SHEET

Date 8-10-81 Location WAYGROSS / ENG. BUILD-UP

Contaminant ASBESTOS

Employee/~~Social Security~~ No. B. P. HARRDON / 128994

Location/Job Title MACHINIST

Number of similerly exposed employees 2 TO 3

Job Description MECHANIC (BACK END ~~+ to~~ FRONT END JOB)

Sampling Apparatus MSA MODEL G PUMP Serial No. CC 248-7

Sampling Medium AA 0.8 μ FILTER

Sample Number	Sample Period			Sampling Rate		Total Volume LITERS	Lab Number	FIBERS/CC Lab Result	T.W.A. FIBERS/CC
	Start	Stop	Total (mins)	roto.	LPM				
AA2544	1006	1156	110	6	2	220		.19	.19

Weather Conditions: CLEAR & HOT

Ventilation: GENERAL

Respirator Used: ~~AO~~ WILLSON DUST MASK Type: DUST & MIST

Calibration Method Results:

Comments: GASKET MATERIAL SCRAPED OFF, THEN REMAINDER BUFFED / 8 HOURS OR LESS / WK OF BUFFING (WILLSON DUST RESP. WORN) HEAVY PARTICULATE LOAD.

Prepared by M. G. Fiddler Date 8-10-81

SAMPLING DATA SHEET

Date 8-10-81 Location WAYCROSS / ENG. BUILD-UP

Contaminant MINERAL SPIRITS

Employee/Social Security No. AREA

Location/Job Title GOVERNOR RM / PARTS SOAKING VAT

Number of similarly exposed employees 4

Job Description CLEAN + REPAIR GOVERNORS

Sampling Apparatus BDX 44 Pump Serial No. 6-79-162

Sampling Medium CHARCOAL TUBE

Sample Number	Sample Period			Sampling Rate		Total Volume LITER	Lab Number	Lab Result mg/m3	T.W.A. mg/m3
	Start	Stop	Total (mins)	roto.	LPM				
1	0944	1041	57	3.7	.200	11.4		14	14
2	1042	1201	79	3.7	.200	15.8		N.D.	N.D.
BLANK			—			0			

Weather Conditions: HOT + HUMID HIGH 80'S

Ventilation: EXHAUST HOOD

Respirator Used: NONE Type: —

Calibration Method Results:

Comments: SAMPLE TAKEN BY HOOD IN BREATHING ZONE (AREA SAMPLE)

Prepared by M. E. Barker Date 8-10-81

SAMPLING DATA SHEET

(Governor Rm)

Date 7-10-81 Location WAYCROSS / ENG. BUILD-UP

Contaminant MINERAL SPIRITS

Employee/Social Security No. D. WILLIAMS / #128957

Location/Job Title GOVERNOR RM JOB / MECHANIC

Number of similarly exposed employees 5

Job Description CLEAN + REPAIR GOVERNORS

Sampling Apparatus BDX 44 Serial No. 6-74-[illegible]2

Sampling Medium CHARCOAL TUBE

Sample Number	Sample Period			Sampling Rate		Total Volume	Lab Number	Lab Result mg/M3	T.W.A. mg/M3
	Start	Stop	Total (mins)	roto.	LPM				
3	1300	1401	61	3.7	0.200	12.2		23	23
4	1401	1503	62	3.7	0.200	12.4		37	37
~~BLANK~~									
BLANK								ND	

Weather Conditions: HOT & HUMID (RM. HAS AC)

Ventilation: GENERAL

Respirator Used: NONE Type: ——

Calibration Method Results:

Comments: ~~PERSONAL~~ PERSONAL SAMPLE IN BREATHING ZONE OF MECHANIC

LOC 0.012 mg

Prepared by M E Baldwin Date 8-19-81

SABAN INDUSTRIES (SAB)

MIKE SABAN 312-625-6244

8328687 CYL. TEST VALVE PACKING (ASBESTOS)

PORTOR HAYDEN Co. (POR)

ANYONE (804) 798-9038

TEXTILE TAPE (NO ASBESTOS PRODUCTS)

MR. PORSEY

WAB

HOWARD MUNDAY 721-1299 (MONDAY)

ASBESTOS (?)

514593 NYLON

558251 A

564866 A

564861 NYLON

558255 A

558248 A

DAVE KERR

412-273-1054

Richard

ELECTROMOTIVE DIVISION (EMD)

MILT LARSON 704-349-3300

	ASBESTOS Y	ASBESTOS N	
8416803	X		AIR DUCT TO CC
8390072	X		SOAK BACK FILTER
8470799	X		CYL. HEAD SUPPORT FRAME GASKET
8470800	X		"
8328687	X		CYL. TEST VALVE PACKING
8507085	X		WAGON BODY TO BACK-END HOUSING
8069444	X		12 CYL. OIL MANIFOLD
8020621		X	WATER MANIFOLD (FRONT END)

TOM MORGAN

DUROX

RED MARK ON SIDE

ED RATHMAN 913-371-0707

081380	Y	HOUSING TO C.C.
081498	Y	C. TO HOUSING
098141	Y	COVER TO H. (12 CYL.)
75858	Y	OIL RETAINER
116804	Y	AIR DUCT TO C.C.
66330	Y	OIL MANIFOLD
66424	Y	TURBO FILTER
66331	Y	TURBO FILTER
29467	Y	OIL PUMP GASKET
25988	Y	PEE PIPE GASKET
42354	Y	JUMPER LINE (WATER)
83579	Y	
04460	Y	
37947	Y	
39110	Y	
59750	Y	
4593	N	NOT IN THEIR LINE
8251		
4866		
54861		
58255		
58248		
67253		VICTOPAC

L.L. KORYTA
216-238-5350
CLEVELAND
89-79-0

CHICAGO

POWER PARTS (PP)

JERRY NICHOLS 312-772-4600

8081380	HOUSING TO C.C.
8081398	AUX. GENERATOR DRIVE
8095027	BLOWER SUP + CC
8185923	COVER TO H (G-ENG)
8451659	COVER TO H
8403484	AFTERCOOLER
8470795	CYL. HEAD SUPPORT FRAME GASKETS
8470796	(WAGON BODY GASKETS)
8470797	"
8470798	"
3029149	WATER PUMP GASKET
3044742	OVER SPEED HOUSING TO FRAME
3069444	12 CYL. OIL MANIFOLD
3477757	OIL PAN BLANK
3083581	
3083579	
337946	
204460	
337947	
039110	
159750	
967253	VICTOPAC

90% CONTAIN ASBESTOS

Jacksonville, Florida, October 2, 1981 CAM:jlj

Mr. C. S. Stringfellow
Chief Mechanical Officer

On August 10 and 11, 1981, our industrial hygienist conducted an air sampling survey at the Waycross Shop. This survey was requested by Mr. O. G. Wood, Waycross Shop Superintendent, to determine air quality in the Engine Buildup Shop.

The sampling results indicated that the airborne concentrations for asbestos fibers and mineral spirits vapor were within currently acceptable exposure limits. Details of the study may be found in the attached report. No further control measures are recommended at this time.

If you have any questions, please contact my office at ext. 1500 or Mr. M. E. Badders at ext. 1531 in Jacksonville for further information.

C. A. Mead, M. D.
Chief Medical Officer

cc: Mr. O. G. Wood