

WV, 0220 #66

INDUSTRIAL HYGIENE RESULTS

DATE: April 6, 1987.

PROJECT: Monitor a pipefitter for asbestos exposure while removing an asbestos gasket.

DATE OF SAMPLES: 1/16/87

<u>SAMPLE</u>	<u>TIME START</u>	<u>TIME STOP</u>	<u>RESPIRATOR</u>	<u>RESULTS</u>
Z-8874	14:25	15:29	No	0.035 fibers/cc

DISCUSSION: This exposure was less than the OSHA 8-hour Time Weighted Average Permissible Exposure Limit (PEL) of 0.20 f/cc and below the action level of 0.10 fibers/cc.

RECOMMENDATIONS: Request I.H. monitoring when asbestos gaskets are being removed since we need to get more background data on such operations.

METHOD OF ANALYSIS: Microscopy

DATA AND REPORT BY: T. L. Grittie

ANALYSIS BY: Kemron Environmental

COPY TO: D. A. Boggs, E. L. Doerflein, C. A. Gorrell,
W. V. Summers, Ralph Wilson, G. W. Wulfert


T. L. Grittie

TLG/le
5454A

INDUSTRIAL HYGIENE RESULTS

DATE: April 6, 1987.

PROJECT: Monitor insulators for exposure to asbestos during the de-insulation of K-6 within the temporary negative pressure enclosure, Silanes Reactor Tower.

DATE OF SAMPLES: 1/29/87 and 1/30/87

<u>DATE</u>	<u>SAMPLE</u>	<u>TIME</u> <u>START</u>	<u>TIME</u> <u>STOP</u>	<u>RESPIRATOR</u>	<u>RESULTS</u>	<u>TYPE</u>
1/29/87	Z-8817	2:35	3:42	Airline	0.109	BZ
1/29/87	Z-8918	2:36	3:30	Airline	0.021	BZ
1/30/87	Z-8919	12:53	13:40	Airline	0.129	BZ
1/30/87	Z-8920	12:57	13:40	Airline	<0.026	BZ

BZ = Breathing Zone

DISCUSSION: All samples are below the PEL of 0.2 fibers/cc TWA₈. Z-8917 and Z-8919 are above the action level for the monitoring period. Increased wetting may help. The insulators wore airline respirators during the entire monitoring period.

RECOMMENDATIONS: Increase the amount of wetting agent (water) used. Continue using respiratory protection. Request further I.H. monitoring of similar tasks. Share this information with craftsmen.

METHOD OF ANALYSIS: Microscopy

DATA AND REPORT BY: T. L. Grittie

ANALYSIS BY: Kemron Environmental

COPY TO: D. A. Boggs, E. L. Doerflein, J. K. Kyle, F. M. Plechaty, K. B. Purinton, W. V. Summers, G. W. Wulfert.


T. L. Grittie

TLG/1e
5461A

W-07-00#62

INDUSTRIAL HYGIENE RESULTS

DATE: April 6, 1987.

PROJECT: Monitor insulator and area near south corner of fluids lab while removing asbestos from heater. Insulator used glove bag method.

DATE OF SAMPLES: 1/20/87

<u>SAMPLE</u>	<u>TYPE</u>	<u>TIME START</u>	<u>TIME STOP</u>	<u>RESPIRATOR</u>	<u>RESULTS</u>
Z-8881	BZ	10:33	11:01	Comfo II HEPA Filter	<0.032 fibers/cc
Z-8882	A	10:35	11:01	N/A	0.104 fibers/cc

BZ = breathing zone
A = area

DISCUSSION: Both results are below the OSHA permissible exposure limit TWA - 8 of 0.2 f/cc. The area sample was above the action level of 0.1 f/cc during the sampling period. However at the end of the monitoring period no further release of fibers was expected since the job was at that time completed. Therefore it can be assumed that over an 8 hour period the actual area concentration was well below the action level.

RECOMMENDATIONS: Request further IH monitoring when similar jobs are being performed. Share this information with area and craft personnel.

METHOD OF ANALYSIS: Microscopy

DATA AND REPORT BY: C. R. McMillan/T. L. Grittie

ANALYSIS BY: Kemron Environmental

COPY TO: D. A. Boggs, E. L. Doerflein, T. W. Heiskell,
J. K. Kyle, T. L. McHenry, K. B. Purintan,
W. V. Summers, G. W. Wulfert.


T. L. Grittie

TLG/le
5452A

INDUSTRIAL HYGIENE RESULTS

DATE: April 6, 1987.

PROJECT: Monitor insulators removing asbestos insulation using the glove bag technique. SSP Unit. K-36, top deck.

DATE OF SAMPLES: January 16, 1987.

<u>SAMPLE</u>	<u>TIME START</u>	<u>TIME STOP</u>	<u>RESP?</u>	<u>CONC.</u>
Z-8872	10:34	11:30	Airline	0.158 fibers/cc
Z-8873	14:31	15:29	Airline	0.272 fibers/cc

DISCUSSION: Both of the above exposures were unexpectedly high. Since these exposures do not typically extend for 8 hours, but rather 4 one hour exposures, it is doubtful that an overexposure condition was experienced. This, however is only true if during breaks, lunch, etc. the insulator is not exposed to any asbestos (which should be the case). In addition, airline respirators were worn. The above stated protective equipment and work schedule should however in no way diminish the impact of these results. I would recommend that we closely scrutinize if the glove bag method of removal is being used properly. The above results indicate that wetting must be used in conjunction with the glove bag. The high concentrations measured are most likely a result of fibers being released during removal of the glove bag from the line. Since this is the most probably time for release of fibers, the glove bag should be thoroughly wetted and evacuated with the HEPA vacuum before removing it from the line. It is very important that I.H. be called to perform monitoring during similar situations in order to ascertain if these high concentrations are the norm or if this was an isolated incident.

METHOD OF ANALYSIS: Microscopy

DATA AND REPORT BY: T. L. Grittie

COPY TO: D. A. Boggs, E. L. Doerflein, T. K. Ioannou,
J. K. Kyle, F. M. Plechaty, W. V. Summers,
K. B. Purinton, G. W. Wulfert.


T. L. Grittie

TLG/le
5446A

WV-0220 #70

INDUSTRIAL HYGIENE RESULTS

DATE: April 6, 1987.

PROJECT: Monitor contract personnel and area under roof of Polymers I for asbestos. Transite was being removed from the Poly I roof by Tri-State employees.

DATE OF SAMPLES: 1/20/87 and 1/21/87

<u>SAMPLE</u>	<u>TYPE</u>	<u>TIME START</u>	<u>TIME STOP</u>	<u>RESPIRATOR?</u>	<u>RESULTS</u>	<u>DATE</u>
Z-8885	BZ	14:38	15:43	Comfo II HEPA filter	0.074 fiber/cc	1/20
Z-8886	BZ	14:40	15:42	Comfo II HEPA filter	0.160 f/cc	1/20
Z-8887	A	14:42	15:45	N/A	0.070 f/cc	1/20
Z-8888	A	08:26	15:34	N/A	0.004 f/cc	1/21

BZ = Breathing Zone
A = Area

DISCUSSION: All samples were below the OSHA permissible exposure limit. The removal of the transite took less than two hours on both of these days. Z-8886 was above the action level during the monitoring period, but below the PEL. On 1/21/87 area monitoring was performed for 7 hours 8 minutes while the same type work was being performed. This was done to assure that operators entering the area below the roof repair were not being overexposed. As the results of sample Z-8888 indicate there was little to no exposure potential in the area. It also serves to illustrate that when monitored over an 8-hour period the exposure potential did indeed decrease at the end of the time period in which the transite was being removed.

RECOMMENDATIONS: Continue to use respiratory protection as a precautionary measure until more samples may be taken to assure that the PEL is not exceeded. Request I.H. monitoring any time work on transite is being performed to obtain more background data.

METHOD OF ANALYSIS: Microscopy

DATA AND REPORT BY: C. R. McMillan/T. L. Grittie

ANALYSIS BY: Kemron Environmental

COPY TO: D. A. Boggs, J. E. Boley, E. L. Doerflein, T. K. Ioannou, L. P. Smith, W. V. Summers, G. W. Wulfert.
F. M. Plechary


T. L. Grittie

WV-0720 #71

UNION CARBIDE CORPORATION
Specialty Chemicals

Sistersville Plant

February 17, 1987.

INDUSTRIAL HYGIENE
PERSONAL MONITORING REPORT
UCC, SISTERSVILLE

, was monitored for exposure to asbestos on
12/31/86, while running K-36.

Details of the monitoring are shown below:

<u>FIBERS/CC</u>	<u>SAMPLE TIME MINUTES</u>	<u>TIME START STOP</u>	<u>PERSONAL PROTECTION EQUIPMENT</u>	<u>SAMPLE TYPE METHOD</u>
0.01	165	13:25 16:10		P FC

P = Personal
FC = Filter Cassette

's exposure was less than the OSHA permissible exposure limit (PEL) of
0.133 fibers/cc, time weighted average (TWA) for 12 hours.


T. L. Grittie

TLG/le
5355A

UCC 007284

WV-0220 #72

UNION CARBIDE CORPORATION
Specialty Chemicals

Sistersville Plant

February 17, 1987.

INDUSTRIAL HYGIENE
PERSONAL MONITORING REPORT
UCC, SISTERSVILLE

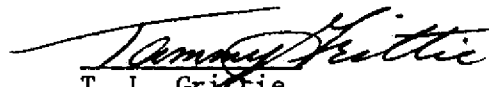
, was monitored for exposure to asbestos on 1/9/87, while repairing/covering asbestos insulation on the stills in the Rectification area of the Sistersville Plant.

Details of the monitoring are shown below:

<u>FIBERS/CC</u>	<u>SAMPLE TIME MINUTES</u>	<u>TIME START STOP</u>	<u>PERSONAL PROTECTION EQUIPMENT</u>	<u>SAMPLE TYPE METHOD</u>
<0.02	55	10:34 11:29	R GL	BZ FC

BZ = Breathing Zone
FC = Filter Cassette
R = Airline Respirator

exposure was less than the OSHA permissible exposure limit (PEL) of 0.2 fibers/cc, time weighted average (TWA) for 8 hours.


T. L. Grittie

TLG/le
5370A

WV-0220-73

UNION CARBIDE CORPORATION
Specialty Chemicals

Sistersville Plant

MEMORANDUM TO: G. W. Wulfert

FROM: T. L. Grittie

DATE: February 17, 1987.

SUBJECT: Results Of Asbests Monitoring

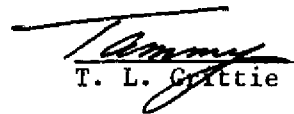
COPY TO: D. G. Beddow J. K. Kyle
D. A. Boggs K. B. Purinton
J. E. Boley W. V. Summers
A. A. Cosper S. Walker
S. L. Curtis

Attached please find the results of the air monitoring for asbestos performed on D&C insulators patching the free standing columns in the Silanes Department. It should be noted that all exposures were considerably below the Action Level.

IH monitoring will continue on a random basis to develop a more extensive data base. These preliminary results indicate that areas in which similar work is performed need not be considered regulated areas. These low levels would not require coveralls, showers or respiratory protection. The use of coveralls and Comfo II's with HEPA filters is, however encouraged.

If you have any questions on the results or recommendations please call me at ext. 521.

Sincerely,


T. L. Grittie

TLG/le
5368A

UCC 007286

ASBESTOS MONITORING RESULTS

<u>SAMPLE</u>	<u>DATE</u>	<u>TYPE</u>	<u>TIME</u> <u>(Min.)</u>	<u>JOB PERFORMED</u>	<u>RESULTS</u> <u>(fibers/cc)</u>	<u>TWAg PEL</u> <u>(fibers/cc)</u>	<u>RESPIRATOR</u>
Z-8814	1/9/87	BZ	55	Repairing asbestos insulation on stills in Rectification area	<0.02	0.20	Airline
Z-8815	1/9/87	BZ	53	Repairing asbestos insulation on stills in Rectification area	0.01	0.20	Airline
Z-8816	1/12/87	BZ	201	Repairing asbestos insulation on stills	0.002*	0.20	Half-face respirator with HEPA filters
Z-8858	1/13/87	BZ	294	Repairing asbestos insulation on stills in Rectification Area	0.04	0.20	Half-face respirator with HEPA filters
Z-8859	1/13/87	BZ	290	Repairing asbestos insulation on stills in Rectification Area	0.03	0.20	Half-face respirator with HEPA filters

UCC 007287

*Dust and debris covered more than 1/6 field area on majority of fields. The concentration on fields which could be counted was 0.002 fibers/cc.

BZ = Breathing Zone

WV-022074

UNION CARBIDE CORPORATION
Specialty Chemicals

Sistersville Plant

February 17, 1987.

INDUSTRIAL HYGIENE
PERSONAL MONITORING REPORT
UCC, SISTERSVILLE

. unknown, was monitored for exposure to asbestos on 1/13/87, while repairing/covering asbestos insulation on the stills in the Rectification area of the Sistersville Plant.

Details of the monitoring are shown below:

<u>FIBERS/CC</u>	<u>SAMPLE TIME MINUTES</u>	<u>TIME</u>		<u>PERSONAL PROTECTION EQUIPMENT</u>	<u>SAMPLE</u>	
		<u>START</u>	<u>STOP</u>		<u>TYPE</u>	<u>METHOD</u>
0.04	294	08:53	11:30	R GL	BZ	FC
		12:58	15:15	Gg		

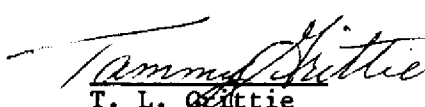
BZ = Breathing Zone

FC = Filter Cassette

R = Half-face filtration respirator with HEPA cartridges

Gg = Goggles

exposure was less than the OSHA permissible exposure limit (PEL) of 0.2 fibers/cc time weighted average (TWA) for 8 hours.


T. L. Guttie

TLG/le
5372A

UCC 007288

WV-0220#75

February 17, 1987.

INDUSTRIAL HYGIENE
PERSONAL MONITORING REPORT
UCC, SISTERSVILLE

was monitored for exposure to asbestos on
10/6/86, while stripping asbestos insulation in the Steam Plant.

Details of the monitoring are shown below:

<u>FIBERS/CC</u>	<u>SAMPLE TIME MINUTES</u>	<u>TIME START STOP</u>	<u>PERSONAL PROTECTION EQUIPMENT</u>	<u>SAMPLE TYPE METHOD</u>
<0.105*	34	13:00 13:34	R GL	BZ FC

R = Respiratory
GL = Gloves
BZ = Breathing Zone
FC = Filter Cassette

exposure was less than the OSHA permissible exposure limit (PEL) of 0.2
fibers/cc, time weighted average (TWA) for 8 hours.


T. L. Grittle

TLG/le
5358A

*This was the lowest detectable limit since the sample time was very short.

cc: G. W. Wulfert

IH
Medical

UNION CARBIDE CORPORATION
Specialty Chemicals

Sistersville Plant

February 17, 1987.

INDUSTRIAL HYGIENE
PERSONAL MONITORING REPORT
UCC, SISTERSVILLE

was monitored for exposure to asbestos on 1/12/87, while running K-36. Contractors were painting in the SSP building while sampling was being performed.

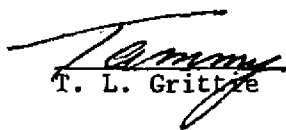
Details of the monitoring are shown below:

<u>FIBERS/CC</u>	<u>SAMPLE TIME MINUTES</u>	<u>TIME START STOP</u>	<u>PERSONAL PROTECTION EQUIPMENT</u>	<u>SAMPLE TYPE METHOD</u>
0.002*	300	1330 1830		P FC

FC = Filter Cassette
P = Personal

Asbestos exposure was less than the OSHA permissible exposure limit (PEL) of 0.133 fibers/cc, time weighted average (TWA) for 12 hours.

The filter was heavily loaded with dust and debris and therefore an official fiber count could not be performed. The fields that were counted indicated the air concentration to be 0.002 fibers/cc. At the time of the sample, painting was being done in the SSP building. This would account for the dirty filter.


T. L. Gritze

TLG/le
5374A

WV-0720 #77

UNION CARBIDE CORPORATION
Specialty Chemicals

Sistersville Plant

February 17, 1987.

INDUSTRIAL HYGIENE
PERSONAL MONITORING REPORT
UCC, SISTERSVILLE

was monitored for exposure to asbestos on
1/14/87, while operating K-15.

Details of the monitoring are shown below:

<u>FIBERS/CC</u>	<u>SAMPLE TIME MINUTES</u>	<u>TIME START STOP</u>	<u>PERSONAL PROTECTION EQUIPMENT</u>	<u>SAMPLE TYPE METHOD</u>
0.01	375	09:45 16:00		P FC

P = Personal
FC = Filter Cassette

exposure was less than the OSHA permissible exposure limit (PEL) of
0.133 fibers/cc, time weighted average (TWA) for 12 hours.


T. L. Grittle

TLG/le
5362A

WV-022078

UNION CARBIDE CORPORATION
Specialty Chemicals

Sistersville Plant

February 17, 1987.

INDUSTRIAL HYGIENE
PERSONAL MONITORING REPORT
UCC, SISTERSVILLE

was monitored for exposure to asbestos on
10/9/86, while removing asbestos insulation in the Steam Plant.

Details of the monitoring are shown below:

<u>FIBERS/CC</u>	<u>SAMPLE</u> <u>TIME</u>	<u>TIME</u>		<u>PERSONAL</u> <u>PROTECTION</u> <u>EQUIPMENT</u>	<u>SAMPLE</u>	
	<u>MINUTES</u>	<u>START</u>	<u>STOP</u>		<u>TYPE</u>	<u>METHOD</u>
0.097	50	14:25	15:15	R GL	BZ	FC

R = Respiratory
GL = Gloves
BZ = Breathing Zone
FC = Filter Cassette

exposure was less than the OSHA permissible exposure limit (PEL) of
0.2 fibers/cc, time weighted average (TWA) for 8 hours.


T. L. Grittle

TLG/le
5360A

WV-0220#79

UNION CARBIDE CORPORATION
Specialty Chemicals

Sistersville Plant

February 17, 1987.

INDUSTRIAL HYGIENE
PERSONAL MONITORING REPORT
UCC, SISTERSVILLE

was monitored for exposure to asbestos on 1/13/87, while performing the regular duties of a reactor area operator.

Details of the monitoring are shown below:

<u>FIBERS/CC</u>	<u>SAMPLE</u> <u>TIME</u>	<u>TIME</u>		<u>PERSONAL</u> <u>PROTECTION</u> <u>EQUIPMENT</u>	<u>SAMPLE</u>	
	<u>MINUTES</u>	<u>START</u>	<u>STOP</u>		<u>TYPE</u>	<u>METHOD</u>
0.01	450	08:30	16:00		BZ	FC

BZ = Breathing Zone
FC = Filter Cassette

exposure was less than the OSHA permissible exposure limit (PEL) of 0.133 fibers/cc, time weighted average (TWA) for 12 hours.


T. L. Griddle

TLG/le
5373A

WV-0770420

February 17, 1987.

INDUSTRIAL HYGIENE
PERSONAL MONITORING REPORT
UCC, SISTERSVILLE

, was monitored for exposure to asbestos on 1/12/87, while repairing/covering asbestos insulation on the stills in the Rectification area of the Sistersville Plant.

Details of the monitoring are shown below:

<u>FIBERS/CC</u>	<u>SAMPLE TIME MINUTES</u>	<u>TIME START STOP</u>	<u>PERSONAL PROTECTION EQUIPMENT</u>	<u>SAMPLE TYPE METHOD</u>
0.002*	201	13:10 16:31	R GL Gg	BZ FC

BZ = Breathing Zone
FC = Filter Cassette
R = Comfo II w/HEPA cartridges
Gg = Goggles

exposure was less than the OSHA permissible exposure limit (PEL) of 0.2 fibers/cc time weighted average (TWA) for 8 hours.

*Dust and debris covered more than 1/6 field area on majority of fields. The concentration on fields which could be counted was 0.002 fibers/cc.


T. L. Gritter

TLG/le
5371A

WV-0220 #81

UNION CARBIDE CORPORATION
Specialty Chemicals

Sistersville Plant

February 17, 1987.

INDUSTRIAL HYGIENE
PERSONAL MONITORING REPORT
UCC, SISTERSVILLE

, was monitored for exposure to asbestos on
11/3/86, while performing the regular duties of an outside operator.

Details of the monitoring are shown below:

<u>FIBERS/CC</u>	<u>SAMPLE TIME MINUTES</u>	<u>TIME START STOP</u>	<u>PERSONAL PROTECTION EQUIPMENT</u>	<u>SAMPLE TYPE METHOD</u>
< 0.06	90	16:30 18:00		P FC

P = Personal
FC = Filter Cassette

exposure was less than the OSHA permissible exposure limit (PEL) of
0.133 fibers/cc, time weighted average (TWA) for 12 hours.


T. L. Gritter

5356A

UCC 007295

WV-0770 #87

UNION CARBIDE CORPORATION
Specialty Chemicals

Sistersville Plant

February 17, 1987.

INDUSTRIAL HYGIENE
PERSONAL MONITORING REPORT
UCC, SISTERSVILLE

was monitored for exposure to asbestos on
1/13/87, while repairing/covering asbestos insulation on the stills in the
Rectification area of of the Sistersville Plant.

Details of the monitoring are shown below:

FIBERS/CC	SAMPLE TIME MINUTES	TIME		PERSONAL PROTECTION EQUIPMENT	SAMPLE	
		START	STOP		TYPE	METHOD
0.03	290	08:55	11:30	R GL	BZ	FC
		12:59	15:14	Gg		

BZ = Breathing Zone

FC = Filter Cassette

Gg = Goggles

R = Half-face filtration respirator w/HEPA cartridges

exposure was less than the OSHA permissible exposure limit (PEL) of
0.2 fibers/cc, time weighted average (TWA) for 8 hours.


T. L. Grittle

TLG/le
5369A

UCC 007296

WV-0220 #83

February 17, 1987.

INDUSTRIAL HYGIENE
PERSONAL MONITORING REPORT
UCC, SISTERSVILLE

, was monitored for exposure to asbestos on
10/6/86, while stripping asbestos insulation in the Steam Plant.

Details of the monitoring are shown below:

<u>FIBERS/CC</u>	<u>SAMPLE TIME MINUTES</u>	<u>TIME START STOP</u>	<u>PERSONAL PROTECTION EQUIPMENT</u>	<u>SAMPLE TYPE METHOD</u>
<0.096	34	13:00 13:34	R GL	BZ FC

R = Respiratory
GL = Gloves
BZ = Breathing Zone
FC = Filter Cassette

exposure was less than the OSHA permissible exposure limit (PEL) of
0.2 fibers/cc, time weighted average (TWA) for 8 hours.


T. L. Grittle

TLG/le
5359A

WU-0720 #21

UNION CARBIDE CORPORATION
Specialty Chemicals

Sistersville Plant

February 17, 1987.

INDUSTRIAL HYGIENE
PERSONAL MONITORING REPORT
UCC, SISTERSVILLE

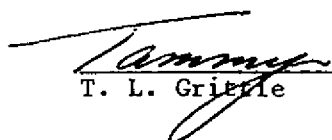
, was monitored for exposure to asbestos on
10/9/86, while removing asbestos insulation in the Steam Plant.

Details of the monitoring are shown below:

<u>FIBERS/CC</u>	<u>SAMPLE TIME MINUTES</u>	<u>TIME START STOP</u>	<u>PERSONAL PROTECTION EQUIPMENT</u>	<u>SAMPLE TYPE METHOD</u>
< 0.07	51	14:25 15:16	R GL	BZ FC

R = Respiratory
GL = Gloves
BZ = Breathing Zone
FC = Filter Cassette

, exposure was less than the OSHA permissible exposure limit (PEL) of
0.2 fibers/cc, time weighted average (TWA) for 8 hours.


T. L. Grizzle

TLG/le
5357A

UCC 007298

February 17, 1987.

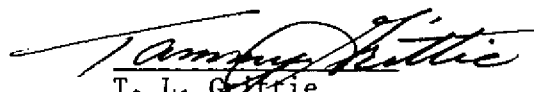
INDUSTRIAL HYGIENE
PERSONAL MONITORING REPORT
UCC, SISTERSVILLE

, was monitored for exposure to asbestos on 1/9/87, while repairing/covering asbestos insulation on the stills in the Rectification area of the Sistersville Plant.

<u>FIBERS/CC</u>	<u>SAMPLE TIME MINUTES</u>	<u>TIME</u>		<u>PERSONAL PROTECTION EQUIPMENT</u>	<u>SAMPLE</u>	
		<u>START</u>	<u>STOP</u>		<u>TYPE</u>	<u>METHOD</u>
0.01	53	10:35	11:28	R GL	BZ	FC

BZ = Breathing Zone
FC = Filter Cassette
R = Airline Respirator

exposure was less than the OSHA permissible exposure limit (PEL) of 0.2 fibers/cc, time weighted average (TWA) for 8 hours.


T. L. Gittie

TLG/1e
5375A