



DOW CHEMICAL U.S.A.

September 16, 1982

LOUISIANA DIVISION

P. O. BOX 150

PLAQUEMINE, LOUISIANA 70764-0150

504 389-8000

H. M. Bell 4701
W. J. Neely 2306

Please circulate:
J. Diamond 2601
J. Medine 2601

Please circulate:
Dr. M. Currier 2303
G. W. Daigre 3502-E
C. E. Halphen 3502-E

Please circulate:
W. Clark 3601
J. Paul 3601
R. Ross 3601

~~Please circulate:~~
~~H. M. Bell~~ 5601
~~W. J. Neely~~ 5601

Please circulate:
B. Heinz 3701
J. McKirdy 3701

RESULTS OF THE BI-ANNUAL ASBESTOS SURVEY IN THE CHLOR-ALKALI II, CELL SERVICE AND CHLORINE PLANTS

Summary

The asbestos in air monitoring for first half of 1982 has been completed in the Chlor-Alkali II, Cell Service, and Chlorine Plants. Short term personnel and area excursion sampling was selected to depict peak concentrations of airborne asbestos. Survey results should be compared to the OSHA Permissible Exposure Limits (PEL) of two (2) fibers per cubic centimeter greater than five (5) microns for eight-hour time weight averages and a ceiling limit of ten (10) fibers per cubic centimeter greater than five (5) microns. Survey results in the Cell Service and Chlorine plants were below the PEL of two (2) fibers per cubic centimeter greater than five (5) microns in length for an eight-hour time weighted average. The Chlor-Alkali II plants results revealed only one (1) short term ($\approx$ 30 minutes) breathing zone sample of 5.7 fibers per cubic centimeter. The sample should be compared to the ceiling limit of ten (10) fibers per cubic centimeter (see attachment).

Good housekeeping, strict safe operating procedures, and a constant vigil for problem areas are the most important considerations for a successful abatement program. Employees must be informed of the survey results and must review the consequences of exposure to toxic amounts of asbestos fibers. (See attachment)

Introduction

The required asbestos in air monitoring for the first half of 1982 has been completed. The survey serves to help protect the employees against over-exposure, pinpoint problem areas and fulfill the requirements of the Federal Occupational Safety and Health Act.

Discussion

In addition to everyday safety equipment, operators are required to wear disposable paper suits, rubber gloves and proper dust respirators when handling or working with friable asbestos. The safe procedure for handling asbestos should be discussed with each new employee before entering the work area and reviewed annually with the experienced operators as part of the ongoing Industrial Hygiene Education Program.

Experimental

Sampling Method - Personnel samples are collected from the operators' breathing zone with a mixed cellulose ester membrane filter (37 mm diameter; 0.8 micron pore size) mounted on an open-face filter holder and attached to the operators' lapels. These cassettes are connected to monitoring pumps calibrated with a soap bubble meter to operate at a rate of 1.5 to 2.0 liters per minute.

Area samples are collected utilizing the same equipment and method as the personnel samples.

Analytical - The asbestos samples are analyzed using the NIOSH-Approved Method, P & CAM 239.

Results (See Attachment)

Monitoring results of twenty-four (24) samples indicate all but one sample was below the present exposure limit of 2 fibers > 5 microns in length per cubic centimeter for an eight-hour time weight average PEL.

Twenty-two (22) personnel samples were collected from the operators' breathing zones. A high of 5.7 fibers per cc was recorded.

The highest personnel breathing zone sample was a short excursion sample of thirty (30) minutes during a cell pulping operation and is intended to characterize a peak breathing zone concentration. The sample breathing zone measurement should be compared to PEL ceiling concentration of ten (10) fibers per cubic centimeter.

Permissible Exposure Limits

The two (2) area samples recorded a high of 0.28 fibers per cc in the asbestos storage room.

Recommendations

Short-term excursion sampling is recommended in future sampling to better determine if problems exist in some jobs.

Conclusions

The monitoring results were satisfactory and below the established exposure limit of two (2) fibers per cubic centimeter eight-hour time weighted average or for short-term excursion sampling below the ten (10) fiber per cubic centimeter ceiling. Due to the hazardous nature of asbestos, housekeeping and safe operating procedures remain the most important considerations for an abatement program. This must be a daily, job-by-job program to be successful and to offer the greatest protection to the employee.

The Chlor-Alkali II, Cell Service and Chlorine plants employees must be informed of this survey's results and the consequences of exposure to toxic amounts of asbestos reviewed. (See Attachment.)



Terry Campbell
Industrial Hygiene

sb

CHLOR-ALKALI II BLOCK

ATTACHMENT

<u>DATE</u>	<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DURATION (MIN.)</u>	<u>VOLUME (1.)</u>	<u>FIBERS/CC >5 MICRONS IN LENGTH</u>
3/25/82	3112	Personnel - OTT Pulping cells	30	54.75	5.70 *
4/14/82	2996	Personnel - OTT Pulping cells	45	90.00	0.07
6/4/82	2985	Personnel - SOT Pulping Cells	50	100.00	<0.01
6/23/82	2984	Personnel - OTT Pulping cells	64	128.00	<0.01
6/30/82	2983	Personnel - OTT Pulping cells	134	268.00	0.02
7/1/82	2982	Personnel - OTT Pulping cells	149	253.30	0.02

DO 103285
CONFIDENTIAL

CHLORINE BLOCK

ATTACHMENT

<u>DATE</u>	<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DURATION (MIN.)</u>	<u>VOLUME (1.)</u>	<u>FIBERS/CC >5 MICRONS IN LENGTH</u>
5/12/82	2037	Personnel - SOT - Pulping Cells and Filling Pulp Trailer	170	306.000	0.03
5/12/82	2038	Personnel - SOT - Pulping Cells	120	234.000	0.06
5/21/82	2031	Personnel - SOT - Pulping Cells and Filling Pulp Trailer	135	263.250	0.02
5/25/82	1280	Personnel - SOT - Pulping Cells and Filling Pulp Trailer	90	200.250	0.09
6/8/82	2029	Personnel - SOT - Pulping Cells and Filling Pulp Trailer	75	148.125	0.02
6/15/82	1274	Personnel - SOT - Pulping Cells	75	146.250	0.12
6/15/82	1275	Personnel - OTT - Pulping Cells	105	204.750	0.03
6/15/82	1277	Personnel - SOT - Pulping Cells	105	204.750	0.01
6/23/82	3024	Personnel - SOT - Pulping Cells and Filling Pulp Trailer	45	83.250	<0.01
6/28/82	3026	Personnel - SOT - Pulping Cells	150	296.250	<0.01

DO 103286
CONFIDENTIAL

CONSEQUENCES OF EXPOSURE TO TOXIC AMOUNTS

COMPOUND: ASBESTOS

EYES: CONTACT WITH THE DUST CAN CAUSE MECHANICAL IRRITATION
SIMILAR TO THAT CAUSED BY ANY SOLID PARTICLE.

SKIN: UNLIKE FIBROUS GLASS, THE FIBERS DO NOT CAUSE DISCOMFORT
OR MECHANICAL IRRITATION.

INGESTION: SOME EVIDENCE SUGGESTS THAT LONG TERM INGESTION OF
ASBESTOS MAY INCREASE CHANCES OF STOMACH CANCER.

X DUST INHALATION: SHORT TERM: HIGH CONCENTRATIONS (WELL ABOVE ACCEPTABLE
LEVELS) MAY CAUSE ONLY MODERATE DISCOMFORT FROM
MECHANICAL IRRITATION.

LONG TERM: THE FIBERS CAN CAUSE SCARRING OF THE
LUNGS (ASBESTOSIS). A CANCER OF THE CHEST LINING
(MESOTHELIOMA) MAY ALSO RESULT FROM ASBESTOS EXPOSURE.
MOST IMPORTANT, ASBESTOS EXPOSURE AND CIGARETTE
SMOKING GREATLY INCREASE THE RISK OF LUNG CANCER.

IHG: ACGIH TLV IS 2 FIBERS/CC

AUTHOR: G. H. FLORES

CHECKED BY: R. L. DANIEL - INDUSTRIAL HYGIENE
G. C. JERSEY - TOXICOLOGY
R. E. FLAKE - MEDICAL

ISSUE DATE: REVISED: 6-6-80

Corrections were made due to calculation errors in determination of sample volume.



Kemron Environmental Services

Sample Source See Below
Collected by Dow Chemical Co.
For Dow Chemical Co.
Post Office Box 150
Plaquemine, LA 70764
Attn: Billy Thomas

Report Date 02/03/83
Date Collected See Below
Date Received 01/04/83
Date(s) Analyzed See Below
Data Number 010483-1
Purchase Order Number GSI # 21635

Results of Analysis

Sample Identification

Asbestos (fibers > 5u/mL)

2953	0.05
2956	0.07
2957	0.20
2963	0.08
2964	0.16
2965	0.15
2970	0.20
2981	0.23
3170	0.10
1385	0.12
1382	0.85
1381	0.42
3034	0.14

Date/Time/Analyst

01/10/1600/NS

* Samples were preserved and analyzed as per approved EPA reference method cited in the following pages.

mk

Analysis Number 83-015-01

M. Rao Arimilli
M. Rao Arimilli
Chief Chemist

Official Methods Used In This Analysis

Jorge M. ...

Administrative Office: Marietta, Ohio 235 Second Street (614) 374-2222 Zip 45750

Laboratory Locations:

- | | | | | |
|--|--|---|--|--|
| ☐ BATON ROUGE, LOUISIANA
16530 Highland Road
(504) 293-6650 Zip 70808 | ☐ CHICAGO, ILLINOIS
3570 North Avondale Avenue
(312) 588-8500 Zip 60618 | ☐ FARMINGTON HILLS, MICHIGAN
32740 Northwestern Highway
(313) 626-2426 Zip 48018 | ☐ MARIETTA, OHIO
235 Second Street
(614) 374-2222 Zip 45750 | ☐ PORT NECHES, TEXAS
1216 Port Neches Avenue
(713) 727-1661 Zip 77651 |
|--|--|---|--|--|

DO 103288
CONFIDENTIAL



Kemron Environmental Services

Sample Source See Below
Collected by Dow Chemical Co.
For Dow Chemical Co.
Post Office Box 150
Plaquemine, LA 70764
Attn: Billy Thomas

Report Date 02/03/83
Date Collected See Below
Date Received 01/04/83
Date(s) Analyzed See Below
Data Number 010483-1
Purchase Order Number GSI # 21635

Results of Analysis

Sample Identification

Asbestos (fibers > 5u/mL)

3033	<0.01
3032	<0.01
3030	0.06
3629	0.04
3036	0.01
3641	0.18
3658	0.19
3706	0.05
1370	0.68
1369	0.10
1356	0.37
1354	0.34
1355	0.14

Date/Time/Analyst

01/10/1600/NS

- * Samples were preserved and analyzed as per approved EPA reference method cited in the following pages.

mk

Analysis Number 83-015-01

M. Rao Arimilli
M. Rao Arimilli
Chief Chemist

Official Methods Used In This Analysis

Administrative Office: Marietta, Ohio 235 Second Street (614) 374-2222 Zip 45750

DO 103289
CONFIDENTIAL

Laboratory Locations:

☐ BATON ROUGE, LOUISIANA
16350 Highland Road
(504) 293-8650 Zip 70808

☐ CHICAGO, ILLINOIS
3570 North Avondale Avenue
(312) 588-8500 Zip 60618

☐ FARMINGTON HILLS, MICHIGAN
32740 Northwestern Highway
(313) 626-2426 Zip 48018

☐ MARIETTA, OHIO
235 Second Street
(614) 374-2222 Zip 45750

☐ PORT NECHES, TEXAS
1216 Port Neches Avenue
(713) 727-1661 Zip 77651



Kemron Environmental Services

Sample Source See Below
Collected by Dow Chemical Co.
For Dow Chemical Co.
Post Office Box 150
Plaquemine, LA 70764
Attn: Billy Thomas

Report Date 02/03/83
Date Collected See Below
Date Received 01/04/83
Date(s) Analyzed See Below
Data Number 010483-1
Purchase Order Number GSI # 21635

Results of Analysis

Sample Identification

Asbestos (fibers > 5u/mL)

2504	0.80
2505	>0.86 (overloaded) ?
3978	0.06
3977	0.10
2503	0.12
^{3840 ?} 3804	0.06
3889	0.12
3976	0.06
3618	0.01
2501	<0.01
2502	0.05
2506	No fibers found

Date/Time/Analyst

01/10/1600/NS

* Samples were preserved and analyzed as per approved EPA reference method cited in the following pages.

mk
Analysis Number 83-015-01

M. Rao Arimilli
M. Rao Arimilli
Chief Chemist

Official Methods Used In This Analysis

Administrative Office: Marietta, Ohio 235 Second Street (614) 374-2222 Zip 45750

DO 103290
CONFIDENTIAL

Laboratory Locations:

☐ BATON ROUGE, LOUISIANA
16550 Highland Road
(504) 293-8630 Zip 70808

☐ CHICAGO, ILLINOIS
3570 North Avondale Avenue
(312) 588-8500 Zip 60618

☐ FARMINGTON HILLS, MICHIGAN
32740 Northwestern Highway
(313) 626-2426 Zip 48018

☐ MARIETTA, OHIO
235 Second Street
(614) 374-2222 Zip 45750

☐ PORT NECHES, TEXAS
1216 Port Neches Avenue
(713) 727-1661 Zip 77651

0

0

11/3/83

(2)

Sample #	Volume (liters)	Sample #	Volume (liters)
1354	378.50 518.50	2506	Blank
1355	646.00		
2504	255.00		
2505	255.00		
3978	612.00		
3977	612.00		
2503	578.00 476.00		
3840	646.00 510.00		
3889	510.00		
3976	612.00		
3618	442.00 BIK		
2501	210.00 BIK		
2502	140.00 BIK		

1/3/88

Aluminum in Air samples to be analyzed according to
NIOBH Method PCB/M 239

Sample #	Sample Volume (liters)	Sample #	Sample Volume (liters)
12953	268.00	3034	114 771.00
12956	216.00	3033	129 184.50
12957	112.00	3032	237.00
12963	303.60	3030	83.25
12964	178.00	3629	210 530.00
12965	232.00	3036	234.00
12970	60.00	3641	205.00
12981	336.00	3658	252.00
13710	234.00	3706	92.25
1385	637.50	1370	714.00
1382	595.00 corrected $\downarrow 425.00$	1369	374.00
1381	595.00 corrected $\downarrow 425.00$	1356	374.00 corrected to 425.00

Person or Area Monitored Jimmy Sample No 02504
Monitoring for Adulter Type Sample: ☒ Personnel ☐ Area
☐ Excursion ☐ Other _____ Date 12/21/82
Other Chemicals Present: _____ Job Classification laborer Description of task performed during monitoring period
including any unusual activities _____
Time Started 8:30 riding Tow motor - stacking
Time Stopped 11:00 pellets of adulter in back of warehouse
Beginning Flow Rate 1.2 l/min Respirator used ☒ Yes ☐ No Type? _____
Ending Flow Rate 1.7 l/min Wind, Temp. and Humidity _____
Calibration Check Prior to Monitoring? ☒ Yes ☐ No
Calibration Equipment Used? leak meter
NOTE: Job description must be concise and complete. Form filled in by T. Campbell



LOUISIANA DIVISION INDUSTRIAL HYGIENE

Block ASU
Monitoring for Adulter
Other Chemicals Present: _____
Person or Area Monitored Jimmy Smith Warehouse Sample No 02505
Type Sample: ☐ Personnel ☒ Area
☐ Excursion ☐ Other _____ Date 12/21/82
Description of task performed during monitoring period
including any unusual activities South side of warehouse
Adulter storage area
Time Started 8:30
Time Stopped 11:00
Beginning Flow Rate 1.2 l/min Respirator used ☐ Yes ☐ No Type? _____
Ending Flow Rate 1.7 l/min Wind, Temp. and Humidity _____
Calibration Check Prior to Monitoring? ☒ Yes ☐ No
Calibration Equipment Used? leak meter
NOTE: Job description must be concise and complete. Form filled in by T. Campbell



LOUISIANA DIVISION INDUSTRIAL HYGIENE

Block 54 Person or Area Monitored _____ Sample No 03889

Monitoring for Asbestos Type Sample: ☐ Personnel ☒ Area

☐ Excursion ☐ Other _____ Date 12/15/82

Other Chemicals Present: _____ Job Classification _____ Description of task performed during monitoring period including any unusual activities _____

Time Started 7:40 _____

Time Stopped 1:50 _____

Beginning Flow Rate 1.7 lpm Respirator used ☐ Yes ☒ No Type? _____

Ending Flow Rate 1.7 lpm Wind, Temp. and Humidity _____

Calibration Check Prior to Monitoring? ☒ Yes ☐ No

Calibration Equipment Used? Personal _____

NOTE: Job description must be concise and complete. Form filled in by Tony Campbell



LOUISIANA DIVISION INDUSTRIAL HYGIENE

Block 56 Person or Area Monitored Turbine Area outside of room Sample No 03976

Monitoring for Asbestos Type Sample: ☐ Personnel ☒ Area

☐ Excursion ☐ Other _____ Date 12/10/82

Other Chemicals Present: _____ Job Classification _____ Description of task performed during monitoring period including any unusual activities _____

Time Started 8:30 _____

Time Stopped 2:30 _____

Beginning Flow Rate 1.7 lpm Respirator used ☐ Yes ☒ No Type? _____

Ending Flow Rate 1.7 lpm Wind, Temp. and Humidity _____

Calibration Check Prior to Monitoring? ☒ Yes ☐ No

Calibration Equipment Used? Personal _____

NOTE: Job description must be concise and complete. Form filled in by Tony Campbell



LOUISIANA DIVISION INDUSTRIAL HYGIENE

#1

DO 103294
CONFIDENTIAL

Job Cell Service Person or Area Monitored Dean Wetters Sample No 02503
Monitoring for Adaptor Type Sample: ☐ Personnel ☐ Area
☐ Excursion ☐ Other _____ Date 12/16/82
Other Chemicals Present: _____ Job Classification SOT Description of task performed during monitoring period
including any unusual activities Drawing Cathodes

Time Started 8:50
Time Stopped 1:30
Beginning Flow Rate 1.7 l/min Respirator used ☐ Yes ☒ No Type? _____
Ending Flow Rate 1.7 l/min Wind, Temp. and Humidity _____
Calibration Check Prior to Monitoring? ☐ Yes ☒ No
Calibration Equipment Used? Rotameter
NOTE: Job description must be concise and complete. Form filled in by T. Campbell

LOUISIANA DIVISION INDUSTRIAL HYGIENE

Job Cell Service Person or Area Monitored _____ Sample No 03840
Monitoring for Adaptor Type Sample: ☐ Personnel ☒ Area
☐ Excursion ☐ Other _____ Date 12/15/82
Other Chemicals Present: _____ Job Classification _____ Description of task performed during monitoring period
including any unusual activities _____

Time Started 8:50
Time Stopped 1:50
Beginning Flow Rate 1.7 l/min Respirator used ☐ Yes ☒ No Type? _____
Ending Flow Rate 1.7 l/min Wind, Temp. and Humidity _____
Calibration Check Prior to Monitoring? ☒ Yes ☐ No
Calibration Equipment Used? Rotameter
NOTE: Job description must be concise and complete. Form filled in by T. Campbell

LOUISIANA DIVISION INDUSTRIAL HYGIENE

DO 103295
CONFIDENTIAL

Job 56

Person or Area Monitored Paint/Drawing Paint Sample

Sample No 03978

Monitoring for Acetone

Type Sample: ☐ Personnel ☒ Area

☐ Excursion ☐ Other

Date 10/10/82

Other Chemicals Present:

Job Classification _____ Description of task performed during monitoring period including any unusual activities _____

Time Started 8:30

Time Stopped 2:30

Beginning Flow Rate 1.7 L/min

Respirator used ☐ Yes ☐ No

Type? _____

Ending Flow Rate 1.7 L/min

Wind, Temp. and Humidity _____

Calibration Check Prior to Monitoring? ☒ Yes ☐ No

Calibration Equipment Used? Potentiometer

NOTE: Job description must be concise and complete. dry

Form filled in by Terry Campbell

LOUISIANA DIVISION INDUSTRIAL HYGIENE

DO 103296
CONFIDENTIAL

Job 56

Person or Area Monitored De-bagging Room

Sample No 03977

Monitoring for Acetone

Type Sample: ☐ Personnel ☒ Area

☐ Excursion ☐ Other

Date 12/10/82

Other Chemicals Present:

Job Classification _____ Description of task performed during monitoring period including any unusual activities _____

Time Started 8:30

Time Stopped 2:30

Beginning Flow Rate 1.7 L/min

Respirator used ☐ Yes ☐ No

Type? _____

Ending Flow Rate 1.7 L/min

Wind, Temp. and Humidity _____

Calibration Check Prior to Monitoring? ☒ Yes ☐ No

Calibration Equipment Used? Potentiometer

NOTE: Job description must be concise and complete.

Form filled in by Terry Campbell

LOUISIANA DIVISION INDUSTRIAL HYGIENE

Block Cell Surveys Person or Area Monitored Lab Sample No 01354
Monitoring for Asbestos Type Sample: ☐ Personnel ☒ Area
☐ Excursion ☐ Other Date 12/2/82
Other Chemicals Present: Job Classification _____ Description of task performed during monitoring period
including any unusual activities _____
Time Started 8:00
Time Stopped 1:50
Beginning Flow Rate 1.7 l Respirator used ☐ Yes ☒ No Type? _____
Ending Flow Rate 1.7 l Wind, Temp. and Humidity _____
Calibration Check Prior to Monitoring? ☒ Yes ☐ No
Calibration Equipment Used? Check
NOTE: Job description must be concise and complete. Form filled in by T. Campbell

 LOUISIANA DIVISION INDUSTRIAL HYGIENE

Block _____ Person or Area Monitored Dean Williams Sample No 01355
Monitoring for Asbestos Type Sample: ☒ Personnel ☐ Area
☐ Excursion ☐ Other Date 11/17/82
Other Chemicals Present: Job Classification SET Description of task performed during monitoring period
including any unusual activities Drawing Vat
Time Started 8:00
Time Stopped 2:20
Beginning Flow Rate 1.7 l/min Respirator used ☐ Yes ☐ No Type? #6710
Ending Flow Rate 1.7 l/min Wind, Temp. and Humidity _____
Calibration Check Prior to Monitoring? ☒ Yes ☐ No
Calibration Equipment Used? Check
NOTE: Job description must be concise and complete. Form filled in by T. Campbell

 LOUISIANA DIVISION INDUSTRIAL HYGIENE

DO 103297
CONFIDENTIAL

Block 111 Sample Person or Area Monitored _____ Sample No **01385**
Monitoring for Asbestos Type Sample: ☐ Personnel ☒ Area
☐ Excursion ☐ Other _____ Date 11/1/77
Other Chemicals Present: _____ Job Classification _____ Description of task performed during monitoring period
including any unusual activities Crab of Bldg.
Time Started 7:55
Time Stopped 2:00
Beginning Flow Rate _____ Respirator used ☐ Yes ☒ No Type? _____
Ending Flow Rate 1.72 Wind, Temp. and Humidity _____
Calibration Check Prior to Monitoring? ☒ Yes ☐ No
Calibration Equipment Used? 1.5 micron
NOTE: Job description must be concise and complete. Form filled in by _____

 LOUISIANA DIVISION INDUSTRIAL HYGIENE

Block _____ Person or Area Monitored _____ Sample No **01382**
Monitoring for _____ Type Sample: ☐ Personnel ☐ Area
☐ Excursion ☐ Other _____ Date 11/1/77
Other Chemicals Present: _____ Job Classification _____ Description of task performed during monitoring period
including any unusual activities Control Panel by Oven
Bldg. Control
Time Started 8:30
Time Stopped 2:20
Beginning Flow Rate _____ Respirator used ☐ Yes ☐ No Type? _____
Ending Flow Rate 1.72 Wind, Temp. and Humidity _____
Calibration Check Prior to Monitoring? ☒ Yes ☐ No
Calibration Equipment Used? 1.5 micron
NOTE: Job description must be concise and complete. Form filled in by _____

 LOUISIANA DIVISION INDUSTRIAL HYGIENE

DO 103298
CONFIDENTIAL

Block _____ Person Area Monitored _____ Sample No 01381

Monitoring for _____ Type Sample: ☐ Personnel ☐ Area

☐ Excursion ☐ Other _____

Date _____

Other Chemicals Present: _____

Job Classification _____ Description of task performed during monitoring period
including any unusual activities _____

Time Started 8:30

Time Stopped 2:20

Beginning Flow Rate 1.74

Respirator used ☐ Yes ☐ No

Type? _____

Ending Flow Rate _____

Wind, Temp. and Humidity _____

Calibration Check Prior to Monitoring? ☒ Yes ☐ No

Calibration Equipment Used? Dupont

NOTE: Job description must be concise and complete.

Form filled in by _____



LOUISIANA DIVISION INDUSTRIAL HYGIENE

Block _____ Person or Area Monitored _____ Sample No 01370

Monitoring for Asbestos Type Sample: ☐ Personnel ☒ Area

☐ Excursion ☐ Other _____

Date 11/2/82

Other Chemicals Present: _____

Job Classification _____ Description of task performed during monitoring period
including any unusual activities _____

Time Started 7:30

Time Stopped 2:30

Beginning Flow Rate 1.74

Respirator used ☐ Yes ☐ No

Type? _____

Ending Flow Rate 1.74

Wind, Temp. and Humidity _____

Calibration Check Prior to Monitoring? ☒ Yes ☐ No

Calibration Equipment Used? Dupont

NOTE: Job description must be concise and complete.

Form filled in by E. J. Campbell



LOUISIANA DIVISION INDUSTRIAL HYGIENE

DO 103299
CONFIDENTIAL

Block Cell 56 Person or Area Monitored D-513 Sample No 01369

Monitoring for psbashes Type Sample: ☐ Personnel ☒ Area
☐ Excursion ☐ Other Date 10-4-82

Other Chemicals Present: Job Classification Description of task performed during monitoring period
including any unusual activities

Time Started 8:20

Time Stopped 12:00 Noon

Beginning Flow Rate 1.7 l/min Respirator used ☐ Yes ☐ No Type? Pump # 6704

Ending Flow Rate 1.7 l/min Wind, Temp. and Humidity

Calibration Check Prior to Monitoring? ☒ Yes ☐ No

Calibration Equipment Used? Rotameter

NOTE: Job description must be concise and complete. Form filled in by [Signature]



LOUISIANA DIVISION INDUSTRIAL HYGIENE

DO 103300
CONFIDENTIAL

Block _____ Person or Area Monitored _____ Sample No 01356

Monitoring for Asbestos Type Sample: ☐ Personnel ☒ Area
☐ Excursion ☐ Other Date 11/17/82

Other Chemicals Present: Job Classification Description of task performed during monitoring period
including any unusual activities

Time Started 8:00

Time Stopped 2:20

Beginning Flow Rate 1.7 l/min Respirator used ☐ Yes ☐ No Type? #6599

Ending Flow Rate 1.7 l/min Wind, Temp. and Humidity

Calibration Check Prior to Monitoring? ☒ Yes ☐ No

Calibration Equipment Used? Asbestos

NOTE: Job description must be concise and complete. Form filled in by T. Campbell



LOUISIANA DIVISION INDUSTRIAL HYGIENE

641
Monitoring for Asbestos Person or Area Monitored 711 Carpenter Sample No 02970
Type Sample: ☐ Personnel ☐ Area
☒ Excursion ☐ Other _____ Date 8/4/82
Other Chemicals Present: _____ Job Classification OTT Description of task performed during monitoring period
including any unusual activities Pulping
Time Started 7:35
Time Stopped 10:05
Beginning Flow Rate 2 lpm Respirator used ☐ Yes ☐ No Type? _____
Ending Flow Rate 2 lpm Wind, Temp. and Humidity 100% RH
Calibration Check Prior to Monitoring? ☒ Yes ☐ No
Calibration Equipment Used? Brooks
NOTE: Job description must be concise and complete. Form filled in by J. Paul
LOUISIANA DIVISION INDUSTRIAL HYGIENE

DO 103301
CONFIDENTIAL

2
Lock 3601 Person or Area Monitored Steve Armstrong Sample No 02965
Monitoring for Asbestos Type Sample: ☐ Personnel ☐ Area
☒ Excursion ☐ Other _____ Date 9/29/82
Other Chemicals Present: _____ Job Classification OT Description of task performed during monitoring period
including any unusual activities Pulping
Time Started 9:04
Time Stopped 10:00
Beginning Flow Rate 2 l Respirator used ☐ Yes ☐ No Type? _____
Ending Flow Rate 2 l Wind, Temp. and Humidity 80% RH
Calibration Check Prior to Monitoring? ☒ Yes ☐ No
Calibration Equipment Used? Brooks
NOTE: Job description must be concise and complete. Form filled in by J. Paul
LOUISIANA DIVISION INDUSTRIAL HYGIENE

9/29/82
Counted

Block 3601 Person or Area Monitored Terri Carpenter Sample No 02964
Monitoring for Asbestos Type Sample: ☐ Personnel ☐ Area
☒ Excursion ☐ Other _____ Date 9/30/82
Other Chemicals Present: _____ Job Classification OTT Description of task performed during monitoring period
including any unusual activities pulping cell

Time Started 9:29
Time Stopped 11:58
Beginning Flow Rate 2 lpm Respirator used ☐ Yes ☐ No Type? _____
Ending Flow Rate 2 lpm Wind, Temp. and Humidity E @ 5'
Calibration Check Prior to Monitoring? ☒ Yes ☐ No
Calibration Equipment Used? Biora
NOTE: Job description must be concise and complete. Form filled in by J. Paul

 LOUISIANA DIVISION INDUSTRIAL HYGIENE

Block #4 3601 Person or Area Monitored Terri Carpenter Sample No 02963
Monitoring for Asbestos Type Sample: ☐ Personnel ☐ Area
☒ Excursion ☐ Other _____ Date 10/4/82
Other Chemicals Present: _____ Job Classification OTT Description of task performed during monitoring period
including any unusual activities pulping

Time Started 7:45
Time Stopped 10:30
Beginning Flow Rate 2 lpm Respirator used ☐ Yes ☐ No Type? _____
Ending Flow Rate 1.68 Wind, Temp. and Humidity E @ 5'
Calibration Check Prior to Monitoring? ☒ Yes ☐ No
Calibration Equipment Used? Biora
NOTE: Job description must be concise and complete. Form filled in by J. Paul

 LOUISIANA DIVISION INDUSTRIAL HYGIENE

DO 103302
CONFIDENTIAL

Job 3601 Person or Area Monitored Terri Carpenter Sample No 02957
Monitoring for Asbestos Type Sample: ☐ Personnel ☐ Area
☒ Excursion ☐ Other Date 10/5/82
Other Chemicals Present: Job Classification Off Description of task performed during monitoring period
including any unusual activities Pulping
Time Started 1:19
Time Stopped 2:15
Beginning Flow Rate 2 lpm Respirator used ☐ Yes ☐ No Type?
Ending Flow Rate 2 lpm Wind, Temp. and Humidity
Calibration Check Prior to Monitoring? ☒ Yes ☐ No
Calibration Equipment Used? Booster
NOTE: Job description must be concise and complete. Form filled in by J. Paul
LOUISIANA DIVISION INDUSTRIAL HYGIENE

Job 3601 Person or Area Monitored Terri Carpenter Sample No 02956
Monitoring for Asbestos Type Sample: ☐ Personnel ☐ Area
☒ Excursion ☐ Other Date 10/6/82
Other Chemicals Present: Job Classification Off Description of task performed during monitoring period
including any unusual activities Pulping cells
4 filter to wason
Time Started 8:06
Time Stopped 9:54
Beginning Flow Rate 2 lpm Respirator used ☐ Yes ☐ No Type?
Ending Flow Rate 2 lpm Wind, Temp. and Humidity
Calibration Check Prior to Monitoring? ☒ Yes ☐ No
Calibration Equipment Used? Booster
NOTE: Job description must be concise and complete. Form filled in by J. Paul
LOUISIANA DIVISION INDUSTRIAL HYGIENE

DO 103303
CONFIDENTIAL

ock 3601 Person or Area Monitored Jeri Carpenter Sample No 02953
Monitoring for Isocyanates Type Sample: ☐ Personnel ☐ Area

☒ Excursion ☐ Other

Date 10/11/82

Other Chemicals Present:

Job Classification OTT Description of task performed during monitoring period
including any unusual activities

Time Started 7:52

Time Stopped 12:00

Beginning Flow Rate 2 lpm Respirator used ☐ Yes ☐ No

Ending Flow Rate 2 lpm

Calibration Check Prior to Monitoring? ☒ Yes ☐ No

Calibration Equipment Used? Biora

Type?

Wind, Temp. and Humidity

Form filled in by

NOTE: Job description must be concise and complete.

 LOUISIANA DIVISION INDUSTRIAL HYGIENE

DO 103304
CONFIDENTIAL

Job CL₂ Person or Area Monitored Cell Area ROBERT PRIMUS Sample No 03706
 Monitoring for Asbestos Type Sample: ☐ Personnel ☐ Area
☐ Excursion ☐ Other _____ Date 10-14-82
 Other Chemicals Present: _____ Job Classification SOT Description of task performed during monitoring period
Cl₂, NaCl including any unusual activities Pulping
NaOH, H₂
 Time Started 8:45
 Time Stopped 9:55
 Beginning Flow Rate 2.0 Respirator used ☐ Yes ☐ No Type? CONF
 Ending Flow Rate 2.1 Wind, Temp. and Humidity 6 mph
 Calibration Check Prior to Monitoring? ☒ Yes ☐ No
 Calibration Equipment Used? Robometer
 NOTE: Job description must be concise and complete. Form filled in by Jessie

DO 103305
CONFIDENTIAL

Job CL₂ Person or Area Monitored Cell Area Sample No 03710
 Monitoring for Asbestos Type Sample: ☐ Personnel ☐ Area
☐ Excursion ☐ Other _____ Date 10-28-82
 Other Chemicals Present: _____ Job Classification _____ Description of task performed during monitoring period
Cl₂, Cl₂ H₂, NaOH, including any unusual activities Pulping, filling pulp trailer ✓
NaCl
 Time Started 9:00
 Time Stopped 11:00
 Beginning Flow Rate 2.0 Respirator used ☐ Yes ☐ No Type? Personal
 Ending Flow Rate 1.9 Wind, Temp. and Humidity 6 mph, 70°F, 50%
 Calibration Check Prior to Monitoring? ☒ Yes ☐ No
 Calibration Equipment Used? Robometer
 NOTE: Job description must be concise and complete. Form filled in by C. A. Green

Stock CL₂ Person or Area Monitored Cell Area Sample No 03658

Monitoring for Asbestos Type Sample: ☐ Personnel ☐ Area
☐ Excursion ☐ Other _____ Date 10-28-82

Other Chemicals Present:

CO₂, CL₂, H₂, NaOH,

NaCl

Job Classification SOT Description of task performed during monitoring period
including any unusual activities Pulping

Time Started 0900 ✓

Time Stopped 1100 ✓

Beginning Flow Rate 2.1

Respirator used ☒ Yes ☐ No

Type? PERSONAL

Ending Flow Rate 2.1

Wind, Temp. and Humidity 5 mph 70° 25%

Calibration Check Prior to Monitoring? ☒ Yes ☐ No

Calibration Equipment Used? Rotometer

NOTE: Job description must be concise and complete.

Form filled in by R. Polite



LOUISIANA DIVISION INDUSTRIAL HYGIENE

DO 103306
CONFIDENTIAL

Lock CL₂ Person or Area Monitored Cell 112A (TRINUS) Sample No U3629
 Monitoring for Asbestos Type Sample: ☐ Personnel ☐ Area
☐ Excursion ☐ Other _____ Date 10-13-82
 Other Chemicals Present: _____ Job Classification _____ Description of task performed during monitoring period
HCL, CL₂, NaCl including any unusual activities Pulping (7M)
NaOH, H₂
 Time Started ✓ 0700
 Time Stopped ✓ 845
 Beginning Flow Rate 2.4 Respirator used ☒ Yes ☐ No Type? ✓ CONFO
 Ending Flow Rate 2.0 Wind, Temp. and Humidity ✓
 Calibration Check Prior to Monitoring? ☒ Yes ☐ No NOV 12 mph
 Calibration Equipment Used? Rotameter
 NOTE: Job description must be concise and complete. Form filled in by Temper

 LOUISIANA DIVISION INDUSTRIAL HYGIENE

Lock CL₂ Person or Area Monitored ✓ REGGIE WATKINS Sample No 03030
 Monitoring for Asbestos Type Sample: ☒ Personnel ☐ Area
☐ Excursion ☐ Other _____ Date 10-12-82
 Other Chemicals Present: _____ Job Classification SOT Description of task performed during monitoring period
HCL, CL₂, NaCl including any unusual activities Pulping (8-7)
NaOH, H₂
 Time Started ✓ 7:45
 Time Stopped ✓ 9:30
 Beginning Flow Rate 2.0 Respirator used ☒ Yes ☐ No Type? ✓ CONFO
 Ending Flow Rate 1.7 Wind, Temp. and Humidity ✓
 Calibration Check Prior to Monitoring? ☒ Yes ☐ No W 6 MPH
 Calibration Equipment Used? Rotameter
 NOTE: Job description must be concise and complete. Form filled in by ✓

 LOUISIANA DIVISION INDUSTRIAL HYGIENE

DO 103307
 CONFIDENTIAL

Block U-12
Monitoring for Asbestos

Person or Area Monitored Cell Area
Type Sample: ☐ Personnel ☐ Area

Sample No 03032

☐ Excursion ☐ Other

Date 10-5-82

Other Chemicals Present:

CH₂, NaOH, HCL
NaOH, H₂

Job Classification SET Description of task performed during monitoring period
including any unusual activities Routine Rounds in Cell Area

Time Started ✓ 2200

Time Stopped ✓ 2400

Beginning Flow Rate 2.0

Respirator used ☒ Yes ☐ No

Type? mouth bit

Ending Flow Rate 1.95

Wind, Temp. and Humidity —

Calibration Check Prior to Monitoring? ☒ Yes ☐ No

Calibration Equipment Used? Rotometer

NW 2 mph

NOTE: Job description must be concise and complete.

Form filled in by Paul Moinot



LOUISIANA DIVISION INDUSTRIAL HYGIENE

Block 3601
Monitoring for Asbestos

Person or Area Monitored Jeri Pargent
Type Sample: ☐ Personnel ☐ Area

Sample No 02981

☒ Excursion ☐ Other

Date 7/8/82

Other Chemicals Present:

Job Classification OT Description of task performed during monitoring period
including any unusual activities Pulping after startup

Time Started 0800

Time Stopped 1100

Beginning Flow Rate 1.6 lpm

Respirator used ☐ Yes ☐ No

Type? —

Ending Flow Rate 1.6 lpm

Wind, Temp. and Humidity —

Calibration Check Prior to Monitoring? ☒ Yes ☐ No

Calibration Equipment Used? Brooks

ESS @ 2

NOTE: Job description must be concise and complete.

Form filled in by J. Kurf



LOUISIANA DIVISION INDUSTRIAL HYGIENE

DO 103308
CONFIDENTIAL

Block 26 CL Person or Area Monitored Henry Mayer Cell Building Sample No 03036
Monitoring for Asbestos Type Sample: ☒ Personnel ☐ Area
☐ Excursion ☐ Other _____ Date 9-15-82

Other Chemicals Present:

NaOH, HCL, CL₂
NaCl

Job Classification SOT Description of task performed during monitoring period
including any unusual activities Pulping - routine sampling

Time Started 0930

Time Stopped 1130

Beginning Flow Rate 2.1

Respirator used ☐ Yes ☒ No

Type? ✓

Ending Flow Rate 1.8

Wind, Temp. and Humidity

7 mph, 93°F, 99.9%

Calibration Check Prior to Monitoring? ☐ Yes ☐ No

Calibration Equipment Used? _____

NOTE: Job description must be concise and complete.

Form filled in by Henry Mayer



LOUISIANA DIVISION INDUSTRIAL HYGIENE

Block CL Person or Area Monitored Cell Area Station Sample No 03641
Monitoring for Asbestos Type Sample: ☒ Personnel ☐ Area
☐ Excursion ☐ Other _____ Date 10-1-82

Chemicals Present:

HCL, CL₂, NaCl
H₂, NaOH

Job Classification SOT Description of task performed during monitoring period
including any unusual activities Cell Area Rounds & Pulping

Time Started 7100

Time Stopped 2240

Beginning Flow Rate 2.1

Respirator used ☒ Yes ☐ No

Type? Conf

Ending Flow Rate 2.0

Wind, Temp. and Humidity

SSE 4 mph

Calibration Check Prior to Monitoring? ☒ Yes ☐ No

Calibration Equipment Used? Rotometer

NOTE: Job description must be concise and complete.

Form filled in by Stanford



LOUISIANA DIVISION INDUSTRIAL HYGIENE

DO 103309
CONFIDENTIAL

Block Ch Person or Area Monitored J. Richard Cell Area Sample No 03033
Monitoring for Asbestos Type Sample: ☒ Personnel ☐ Area
☐ Excursion ☐ Other _____ Date 9-16-82
Other Chemicals Present: _____ Job Classification SOT Description of task performed during monitoring period
HCL, NaOH, NaCl including any unusual activities Pulping
Ch
Time Started 1300
Time Stopped 1430
Sampling Flow Rate 2.1 Respirator used ☒ Yes ☐ No Type? Full Face ✓
Ending Flow Rate 2.0 Wind, Temp. and Humidity
0-5 mph SE 87
Calibration Check Prior to Monitoring? ☒ Yes ☐ No
Calibration Equipment Used? Roto
NOTE: Job description must be concise and complete. Form filled in by Jenel

Block Ch Person or Area Monitored A. Tostom Cell Area Sample No 03034
Monitoring for Asbestos Type Sample: ☒ Personnel ☐ Area
☐ Excursion ☐ Other _____ Date 9-16-82
Other Chemicals Present: _____ Job Classification SOT Description of task performed during monitoring period
HCL, NaOH, NaOH including any unusual activities Pulping ✓
Ch
Time Started 1300
Time Stopped 1430
Sampling Flow Rate 1.9 Respirator used ☒ Yes ☐ No Type? Full Face
Ending Flow Rate 1.9 Wind, Temp. and Humidity
0-5 mph SE 87
Calibration Check Prior to Monitoring? ☒ Yes ☐ No
Calibration Equipment Used? Roto
NOTE: Job description must be concise and complete. Form filled in by Jenel