REDACTED VERSION

CASE# FY90-1364

SITE ASSESSMENT REPORT
FOR
WESTBANK ASBESTOS
MARRERO, JEFFERSON PARISH, LOUISIANA

September 27, 1991

Prepared for:

J. Chris Petersen
Deputy Project Officer
Emergency Response Branch
EPA - REGION 6

Contract Number: 68-W0-0037

ecology and environment, inc.
12021 LAKELAND PARK BOULEVARD, BATON ROUGE, LOUISIANA 70809, TEL. (504) 291-4698
International Specialists in the Environment

recycled paper

830691

CASE# FY90-1364

SITE ASSESSMENT REPORT
FOR
WESTBANK ASBESTOS
MARRERO, JEFFERSON PARISH, LOUISIANA

September 27, 1991

Prepared for:

J. Chris Petersen
Deputy Project Officer
Emergency Response Branch
EPA - REGION 6

Contract Number: 68-W0-0037

ecology and environment, inc.
12021 LAKELAND PARK BOULEVARD, BATON ROUGE, LOUISIANA 70809, TEL. (504) 291-4698
International Specialists in the Environment

recycled paper

000210

ecology and environment, inc.
12021 LAKELAND PARK BOULEVARD, BATON ROUGE, LOUISIANA 70809, TEL. (504) 291-4698
International Specialists in the Environment

CASE# FY90-1364

Date: September 27, 1991

To: John Martin, OSC
EPA Region 6, Emergency Response Branch

Thru: J. Chris Petersen, DPO
EPA Region 6, Emergency Response Branch

Thru: Kishor Fruitwala, TATL
Region 6, Technical Assistance Team

From: Troy M. Naquin
Region 6, Technical Assistance Team

Subj: Westbank Asbestos
Marrero, Jefferson Parish, Louisiana
TDD# T06-9010-54C
PAN# ELA0375SA

I. INTRODUCTION

On February 6, 1990, Louisiana Department of Environmental Quality (LDEQ) contacted EPA Region 6 Emergency Response Branch (ERB) for assistance in investigating a potential asbestos health hazard in Jefferson Parish, Louisiana, near the westbank of New Orleans. The potential asbestos hazard involved residential areas located in the cities of Westwego, Marrero, and Harvey. On this same day, ERB contacted EPA Technical Assistance Team (TAT) to provide technical assistance and resources for addressing the asbestos problem to LDEQ.

On February 16, 1990, a Technical Direction Document (TDD) was issued to TAT to conduct a site assessment of the Westbank Asbestos site. Specific elements on the TDD include: 1) gather pertinent information from state and local authorities who had begun the investigation, 2) contact local government agencies to obtain historic aerial photographs, 3) develop a

recycled paper

Sampling Quality Assurance/Quality Control Plan (QASP) addressing air and bulk sampling, 4) coordinate with state and local authorities to track all potential sites including location, areas of asbestos, and degree of threat, 5) locate a certified laboratory to analyze the samples, 6) generate polreps and photodocument sites and activities, and 7) consult with and brief OSC.

II. BACKGROUND

Between 1955 and 1965, a Johns-Manville plant operated in Marrero, Jefferson Parish, Louisiana. The plant produced various types of asbestos containing products with the principal product being asphalt roofing material. An asbestos containing material (ACM) by-product was generated by the plant. The by-product, in aggregate form, was pulverized in a hammer mill and mixed with a filler to form a stable roadbed-like material. The asbestos containing aggregate was offered to local residents for driveway construction at no charge.

On February 8, 1990, a meeting with EPA, TAT, LDEQ, and the Louisiana Department of Health and Hospitals (DHH) was held to discuss the Westbank Asbestos project (Attachment I). The Westbank is defined as the portions of Jefferson and Orleans Parishes on the westbank of the Mississippi River (Attachment A). LDEQ informed EPA and TAT that they had collected 10 bulk samples and one air sample from different locations in the westbank area. The samples were analyzed by LDEQ laboratory using the Polarized Light Microscopy (PLM) method and found the ACM to contain two species of asbestos: Crysotile and Crocidolite. The results of LDEQ's samples are found in Table 1. LDEQ requested EPA to determine if any defined public health endangerment existed from ACM located in roadways and residential properties. LDEQ also requested EPA to assess the abandoned Johns-Manville landfill located on the westbank of the Mississippi River for potential water contamination (Attachment A). EPA informed LDEQ that they would conduct a reconnaissance, and collect all available data for the site before offering LDEQ advice on the situation. The site was defined to include the Johns-Manville plant, landfills, associated roadways, and residences.

III. ACTIONS TAKEN

Reconnaissance

TAT conducted drive-by inspections and photodocumentation of the Westbank Asbestos site on February 8, and 28, and March 7, and 8, 1990. The inactive Johns-Manville plant (Photographs 1 - 7) is located on River Road in Marrero, La. Adjacent to the west end of the plant was an active pipeyard which was constructed on top of an abandoned Johns-Manville landfill. TAT

TABLE 1
LDEQ Analytical Results

Bulk Sample Results

Sample #	Location	Avg. Chrysotile %	Avg. Crocidolite %	Total Asbestos %	Remainder %*
1	(b) (6) [redacted]	27	18	45	55
2		26	27	53	47
3		9	23	32	68
4		17	25	42	58
5		26	28	54	46
6		22	23	45	55
7		11	21	32	68
8		27	29	56	44
9		18	27	45	55
10		30	20	50	50

* Non-Fibrous and non-asbestos fibers

Air Sample Results

Sample #	Location	Results
90-01-22	(b) (6) [redacted]	.000003 fiber/cc of air or .0003% asbestos

T06-9010-54C

000213

observed possible ACM outcropping in the ditch below the pipeyard along River Road (Photograph 33 - 36). North of the plant on the batture was another landfill used by Johns-Manville (Photograph 8 - 14). This fenced landfill was heavily vegetated and posted with asbestos warning plaques (Photograph 15). LDEQ informed TAT that a municipal water intake for the city of Marrero was located 0.5 miles downstream from the landfill on the westbank of the Mississippi River. TAT and LDEQ noted that the landfill was inundated with several feet of water during a high flood stage, and the fence had an open gate at the southeast corner (Photograph 20 - 21).

EPA and TAT investigated an inactive landfill located on LaPalco Boulevard which was once utilized by Johns-Manville. The unfenced site was heavily vegetated and contained household garbage. TAT observed potential ACM at the surface of the landfill which appeared to be in three main forms: 1) a black, asphalt-like material, 2) a light gray to off white, fibrous material, and 3) variegated transite floor and siding tiles (Photograph 29 - 32). Residential communities and businesses are located around the perimeter of the landfill.

During the reconnaissance of the cities of Westwego, Marrero, and Gretna, TAT observed ACM in the driveways of the residences which had a light to medium gray, cementitious appearance (Photographs 16 -19) and in some areas appeared to be one to three inches thick (Photograph 22). Found mixed in with the ACM were various asbestos products such as transite pipe (Photograph 23). The extent of ACM contamination was undetermined by LDEQ and TAT during the drive-by inspections.

On February 23, 1990, TAT met with LDEQ Analysis Program Manager, Bob Hannah, and LDEQ representative, Steve Scarborough, to plan an air sampling mission to be conducted at the Westbank Asbestos site. After the meeting, TAT and LDEQ visited the site to choose locations for air sampling of airborne asbestos fibers, and conduct further photodocumentation of the site. TAT recommended three air sampling locations in Marrero: (b) (6) [redacted] (b) [redacted] (Photographs 24 - 25), (b) (6) [redacted] (Photographs 26 - 27) and (b) (6) [redacted] (b) (6) [redacted] (Photograph 28) (Attachment B).

Sampling

It was agreed by all parties that the EPA Emergency Response Team (ERT) Standard Operating Procedures (SOP) guidelines for Outdoor/Ambient Air Sampling for Asbestos would be used for the sampling mission (See QASP Attachment 2). TAT developed a QASP for the air sampling mission (Attachment J) and procured the necessary air sampling equipment. Gilian Aircon 520 High Volume Air Samplers (Photograph 37) were used to perform the air sampling at a flow rate of approximately 15 liters/minute. Each sampler was pre- and post-calibrated with a Gilian Gilibrator (Photograph 38). Samples were collected on 37mm diameter air sampling cassettes with

0.8 micron mixed cellulose ester filters. Sampling stations were arranged at each of the three sites with two upwind and two downwind stations, and one background station in relation to wind direction and location of the ACM. Sampling methodologies and quality assurance/quality control measures are detailed in the QASP.

On March 7, 1990, sampling for airborne asbestos began at the Westbank Asbestos site. Weather conditions during the sampling were partly cloudy skies, temperature in the upper 70's to low 80's, relative humidity 50 - 55%, and predominantly southeasterly winds at 18 - 25 miles per hour. Air sampling was conducted at (b) (6) [redacted] n Marrero (Photographs 39 and 41) on March 7, 1990. The ACM was located at the rear of the house in the driveway (Photograph 40). On March 8, 1990, the residence at (b) (6) [redacted] St. (Photograph 42) in Marrero was sampled for airborne asbestos (Photographs 46-48). The ACM was located in the driveway (Photograph 43) and in the back yard (Photograph 44). The ACM in the driveway appeared to be 0.5 - 0.75 inches thick (Photograph 45). A light drizzle started near the end of the sampling period, although, the sample time was sufficient to allow TAT to collect valid samples for analysis. On March 9, 1990, air sampling was conducted at (b) (6) [redacted] Photograph 49) in Marrero, when a heavy rainfall began and suspended sampling at this site. The sampling period was not long enough for valid samples to be collected; therefore, the samples were discarded. Analytical results of the air sampling conducted revealed all samples to be below the detection limit and the established EPA action level of 0.1 fibers/cc, which is one-half the Occupational Safety and Health Administration (OSHA) standard for an 8 hour time weighted average (TWA) (Table 2).

TABLE 2

Summary of Westbank Asbestos Analytical Results

Results of Phase - Contrast Microscopy Analysis

Sample ID	Fibers /c.c. Observed	No. of Fields Observed	Fibers Per Filter	Volume of Air (Liters)	Fibers /c.c. Per c.c. of Air
GH-01	1	100	490	3587	<0.001*
GH-02	4	100	1962	3551	<0.001
GH-03	2	100	981	3592	<0.001
GH-04	1	100	490	3557	<0.001
GH-05	2	100	981	3592	<0.001
GH-06	0	100	<490	3601	<0.001
WM-07	0	100	<490	3445	<0.001
WM-08	0	100	<490	3442	<0.001
WM-09	2	100	981	3453	<0.001
WM-10	4	100	1962	3449	<0.001
WM-11	1	100	490	3429	<0.001

* Quantitation limit is 0.001 fibers/c.c. of air

Results of Transmission Electron Microscopy Analysis

Sample ID	Analytical Results
GH-02	Unable to analyze due to high amount of particulate matter
GH-05	Below Detection Limit
WM-10	Below Detection Limit

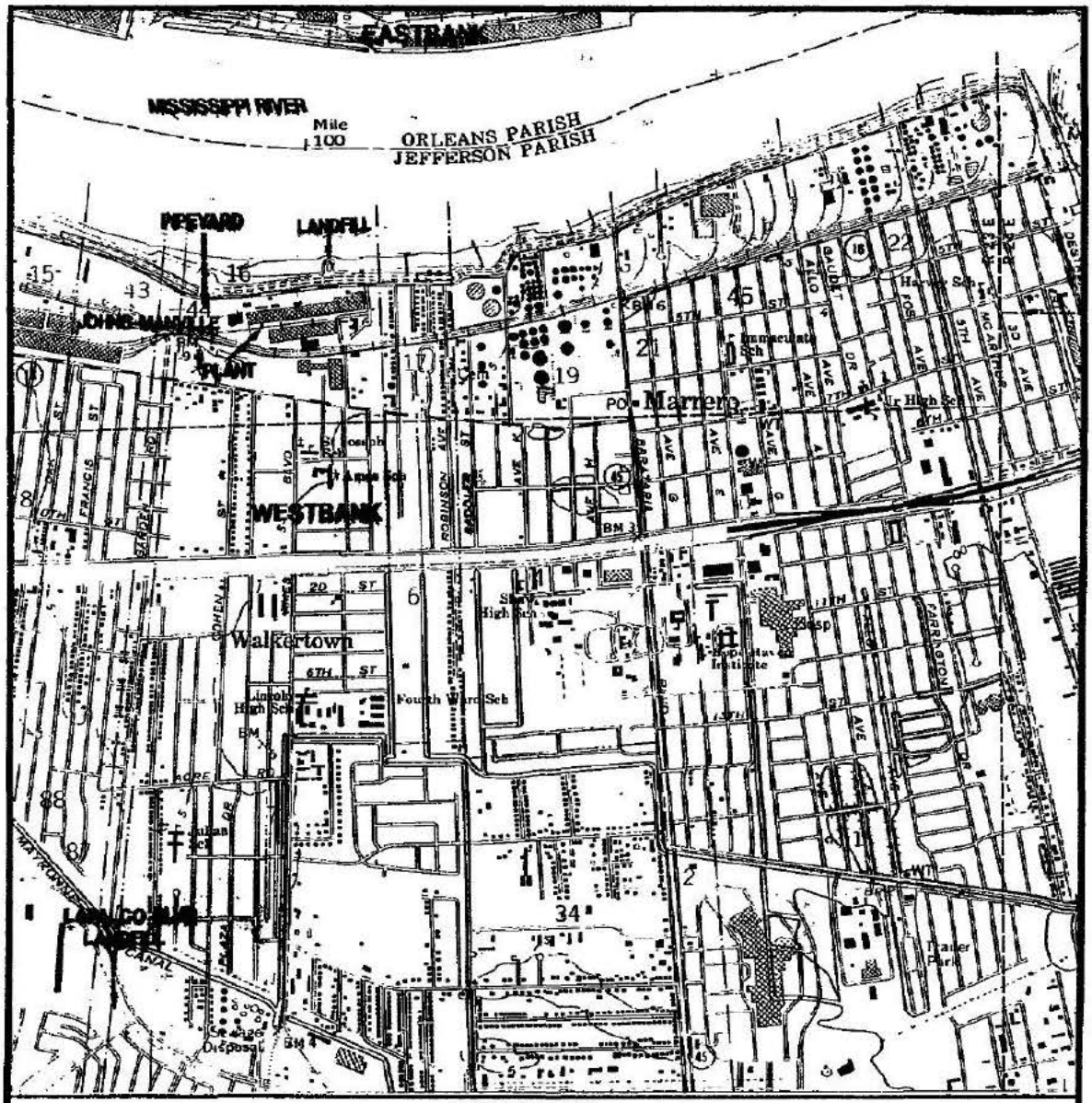
ATTACHMENTS:

A. Site Locations Map
B. Site Sketches (3 Pages)
C. Photolog
   1. Panorama (8 Pages)
   2. Regular (18 Pages)
D. Aerial Photograph
E. Unused Photographs and Negatives
F. Records of Communication (51 Pages)
G. Copy of Logbook (Pages 1 - 45)
H. Polrep #1
I. Project Meeting Attendence Sheet
J. Sampling QA/QC Plan (60 Pages)
K. Copy of Original TDD# T06-9002-08 and Amendment A under Contract #68-01-7368 (3 Pages)
L. Copy of TDD# T06-9010-54 and Amendments A, B, and C (6 Pages)

ATTACHMENT A
Site Locations Map

T06-9010-54C

000218

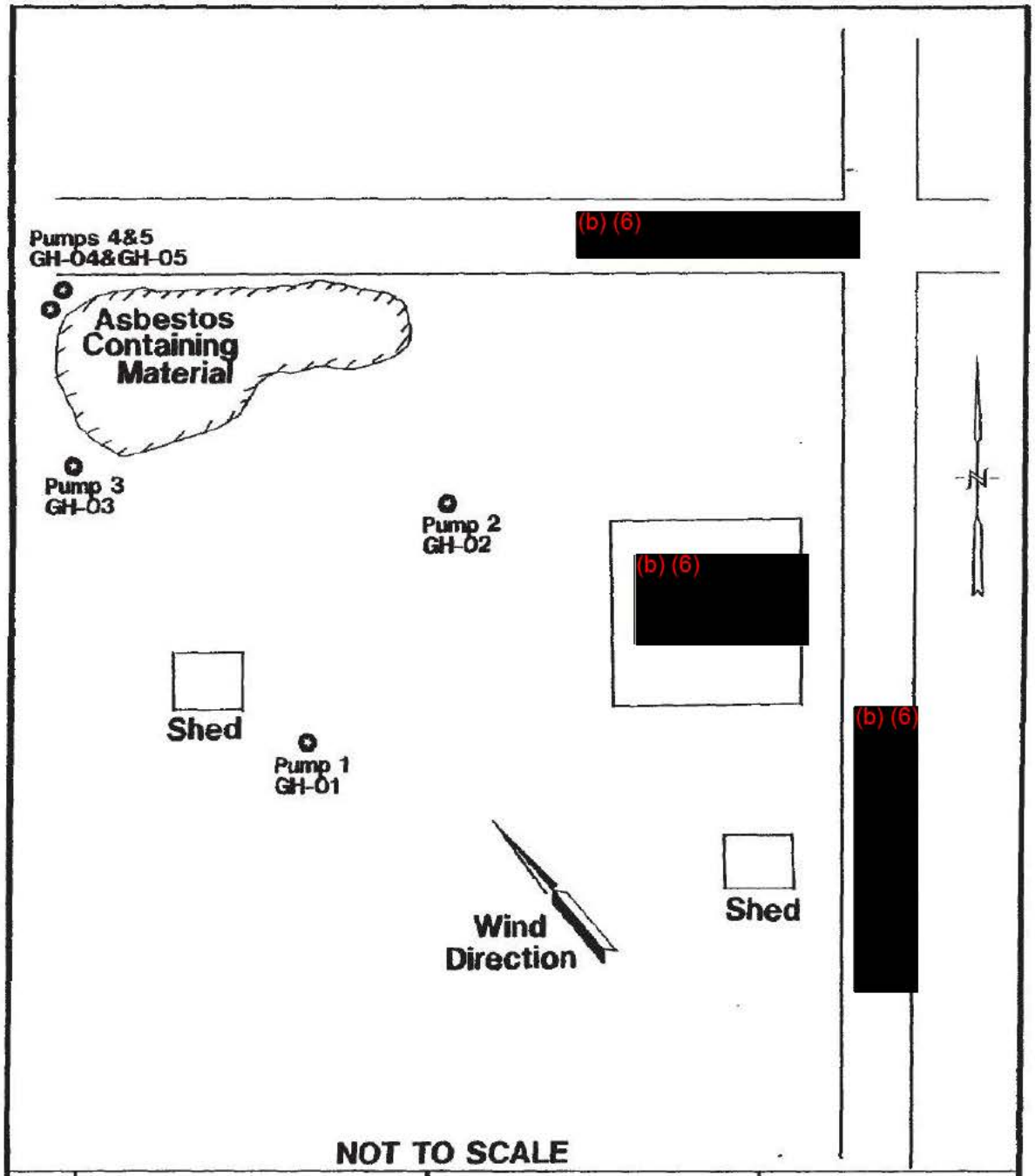


Ecology and Environment, Inc. Technical Assistance Team Region 6	CERCLIS/CASE# FY90-1364	TDD# T06-9010-54C
	SOURCE: New Orleans East Quadrangle USGS 7.5 Minute Series 1989	

000219

ATTACHMENT B
Site Sketches
(3 Pages)

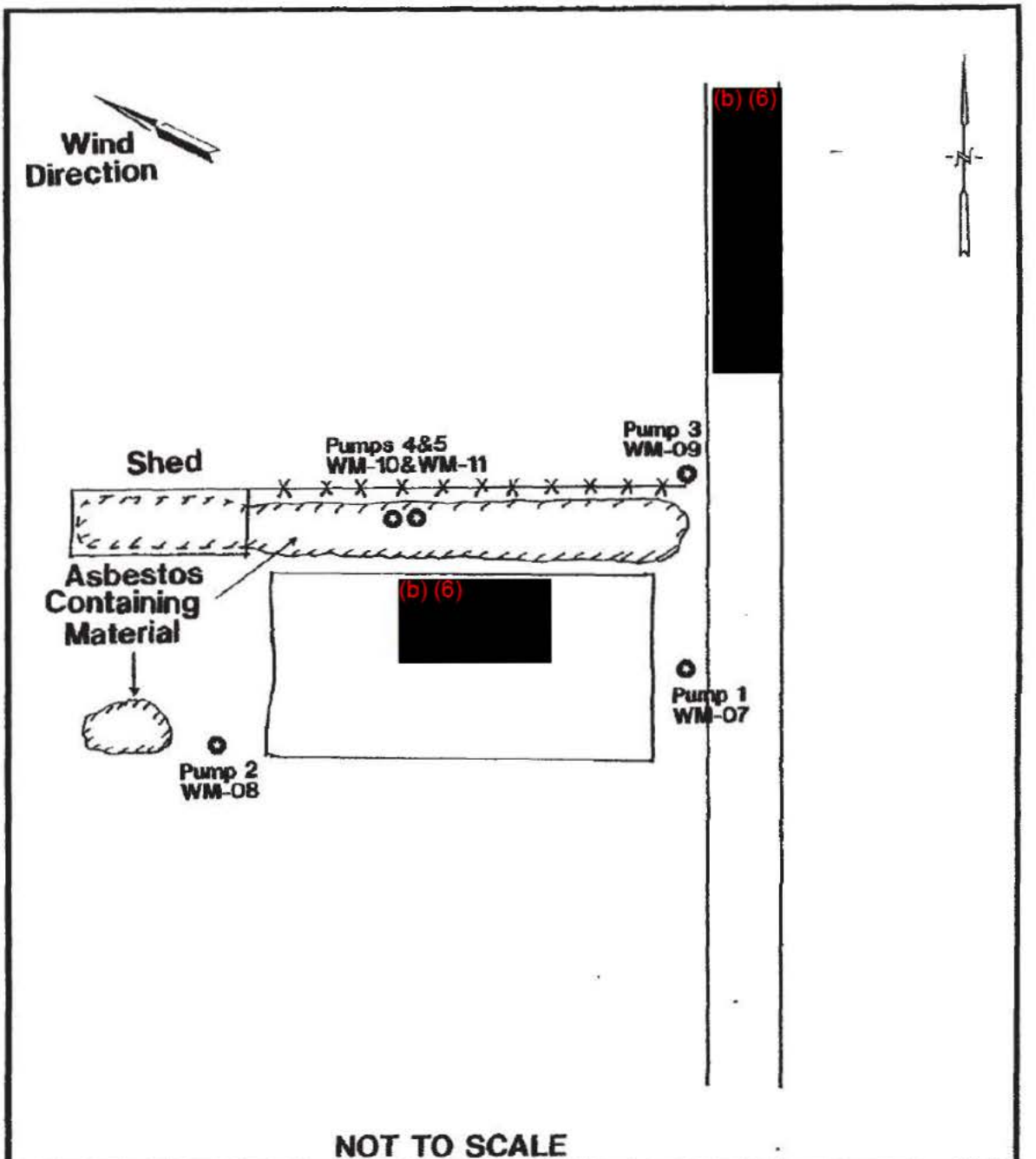
T06-9010-54C



Ecology and Environment, Inc. Technical Assistance Team Region 6	CERCLIS/CASE# FY90-1364	TDD# T06-9010-54C
	SOURCE: Robert W. Sherman Site Sketch: (b) (6)	

000221

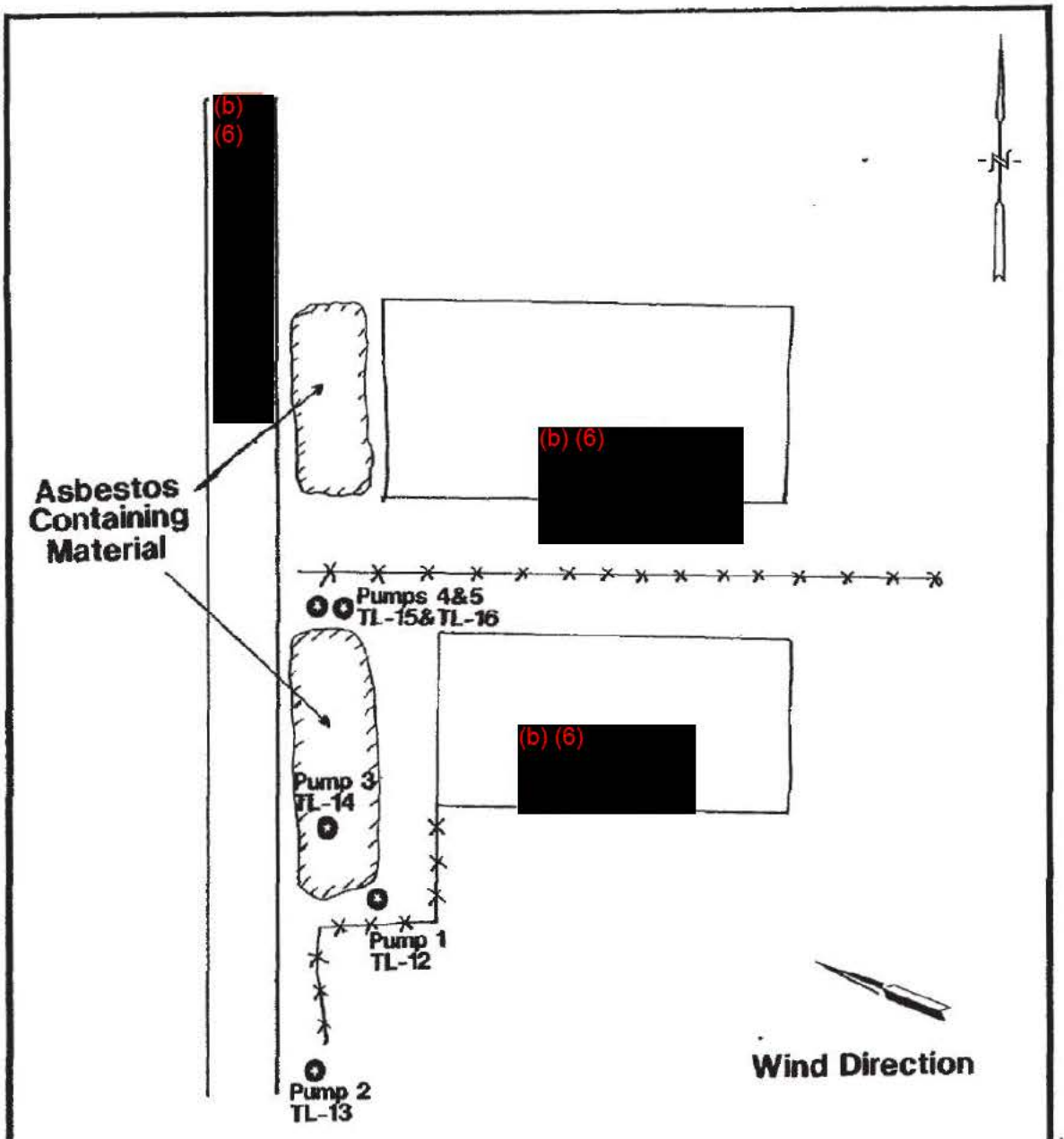
B-1



NOT TO SCALE

Ecology and Environment, Inc. Technical Assistance Team Region 6	CERCLIS/CASE# FY90-1364	TDD# T06-9010-54C
	SOURCE: Robert W. Sherman Site Sketch: (b) (6)	

000222



NOT TO SCALE

Ecology and Environment, Inc. Technical Assistance Team Region 6	CERCLIS/CASE# FY90-1364	TDD# T06-9010-54C
	SOURCE: Robert W. Sherman Site Sketch: (b) (6) [redacted]	

000223

B-3

ATTACHMENT C

Photolog

1. Panorama (8 Pages)
2. Regular (18 Pages)

T06-9010-54C

000224

PHOTOLOG 1

PANORAMA
(8 Pages)

T06-9010-54C

000225

PHOTOLOG 2

REGULAR
(18 Pages)

T06-9010-54C

000225.001

PAGE#: 1

TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO #'s: 1-2 DATE: 02/08/90
TIME: 1556 DIRECTION: SE
PHOTOGRAPHER: T. NAQUIN/R. FERRELL

PANORAMA OF JOHNS-MANVILLE PLANT

PAGE#: 2

TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO #'s: 3-4 DATE: 02/08/90
TIME: 1556 DIRECTION: SE-S
PHOTOGRAPHER: T. NAQUIN/R. FERRELL

PANORAMA OF JOHNS-MANVILLE PLANT

PAGE#: 3

TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO #'s: 5-6 DATE: 02/08/90
TIME: 1556 DIRECTION: S-SW
PHOTOGRAPHER: T. NAQUIN/R. FERRELL

PANORAMA OF JOHNS-MANVILLE PLANT

PAGE#: 4

TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO #: 7 DATE: 02/08/90
TIME: 1556 DIRECTION: SW
PHOTOGRAPHER: T. NAQUIN/R. FERRELL

PANORAMA OF JOHNS-MANVILLE PLANT

PAGE#: 5

TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO #'s: 8-9 DATE: 02/08/90
TIME: 1558 DIRECTION: NE
PHOTOGRAPHER: T. NAQUIN/R. FERRELL

PANORAMA OF JOHNS-MANVILLE LANDFILL ON THE WESTBANK OF THE MISSISSIPPI RIVER

PAGE#: 6

TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO #'s: 10-11 DATE: 02/08/90
TIME: 1558 DIRECTION: NE-N
PHOTOGRAPHER: T. NAQUIN/R. FERRELL

PANORAMA OF JOHNS-MANVILLE LANDFILL ON THE WESTBANK OF THE MISSISSIPPI RIVER

PAGE#: 7

TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO #'s: 12-13 DATE: 02/08/90
TIME: 1558 DIRECTION: N-NW
PHOTOGRAPHER: T. NAQUIN/R. FERRELL

PANORAMA OF JOHNS-MANVILLE LANDFILL ON THE WESTBANK OF THE MISSISSIPPI RIVER

PAGE#: 8

TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO #'s: 14 DATE: 02/08/90
TIME: 1558 DIRECTION: NW
PHOTOGRAPHER: T. NAQUIN/R. FERRELL

PANORAMA OF JOHNS-MANVILLE LANDFILL ON THE WESTBANK OF THE MISSISSIPPI RIVER

PAGE#: 1
TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO#: 15 DATE: 02/08/90
TIME: 1555 DIRECTION: N
PHOTOGRAPHER: T. NAQUIN/R. FERRELL

ASBESTOS WASTE DISPOSAL PLAQUE ON THE LANDFILL FENCE ON THE MISSISSIPPI RIVER

PHOTO#: 16 DATE: 02/08/90
TIME: 1610 DIRECTION: DOWN
PHOTOGRAPHER: J. MARTIN/T. NAQUIN

LDEQ SAMPLE (b) (6) [redacted]
WESTWEGO, LA

PAGE#: 2
TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO#: 17 DATE: 02/08/90
TIME: 1614 DIRECTION: W
PHOTOGRAPHER: J. MARTIN/T. NAQUIN

(b) (6)
DRIV[redacted] SUSPECTED OF
CONTAINING ASBESTOS

PHOTO#: 18 DATE: 02/08/90
TIME: 1616 DIRECTION: DOWN
PHOTOGRAPHER: J. MARTIN/T. NAQUIN

(b) (6)
ROADFILL AT [redacted]
SITE #2

PAGE#: 3
TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO#: 19 DATE: 02/08/90
TIME: 1617 DIRECTION: S
PHOTOGRAPHER: J. MARTIN/T. NAQUIN

(b)(6) [redacted]

PHOTO#: 20 DATE: 02/28/90
TIME: 1219 DIRECTION: NW
PHOTOGRAPHER: T. NAQUIN/M. EZELL

JOHNS-MANVILLE LANDFILL ALONG THE MISSISSIPPI RIVER FLOODED WITH HIGH WATER AND A FENCE WITH AN OPEN GATE

PAGE#: 4
TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO#: 21 DATE: 02/28/90
TIME: 1219 DIRECTION: NW
PHOTOGRAPHER: T. NAQUIN/M. EZELL

JOHNS-MANVILLE LANDFILL ALONG THE MISSISSIPPI RIVER FLOODED WITH HIGH WATER AND A FENCE WITH AN OPEN GATE

PHOTO#: 22 DATE: 02/28/90
TIME: 0940 DIRECTION: E
PHOTOGRAPHER: T. NAQUIN/M. EZELL

CLOSEUP OF THE [redacted] (b)(6) ESIDENCE AT [redacted] (b)(6) DRIVEWAY

PAGE#: 5
TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO#: 23 DATE: 02/28/90
TIME: 0942 DIRECTION: E
PHOTOGRAPHER: T. NAQUIN/M. EZELL

DRIVEWAY OF (b) (6) [redacted] ENCE
CONTAINING SUSPECTED ASBESTOS PRODUCT

PHOTO#: 24 DATE: 02/28/90
TIME: 1145 DIRECTION: W
PHOTOGRAPHER: T. NAQUIN/M. EZELL

DRIVEWAY A (b) (6) [redacted]

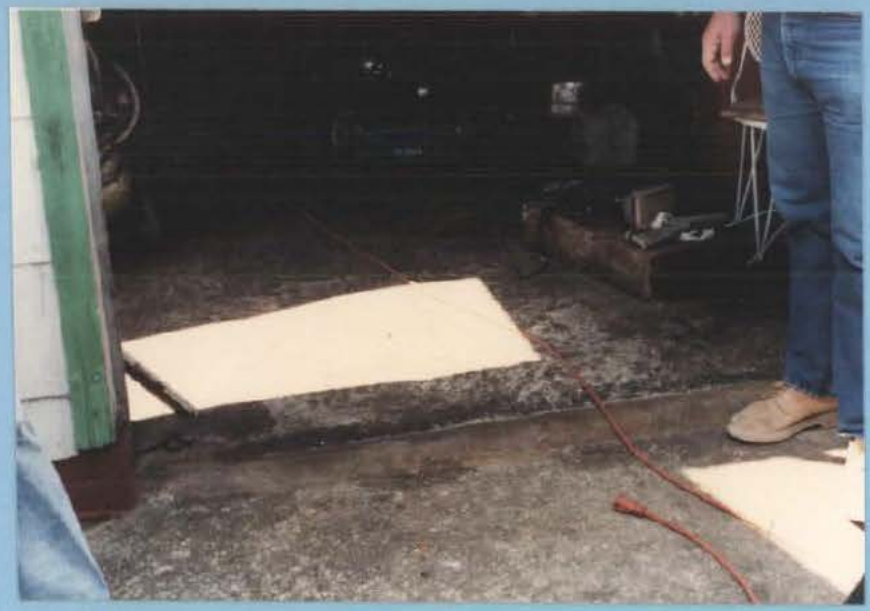
PAGE#: 6
TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO#: 25 DATE: 02/28/90
TIME: 1147 DIRECTION: E
PHOTOGRAPHER: T. NAQUIN/M. EZELL

PULP-LIKE MATERIAL FOUND IN BACK
DRIVE (b) (6) [redacted]

PHOTO#: 26 DATE: 02/28/90
TIME: 1203 DIRECTION: W
PHOTOGRAPHER: T. NAQUIN/M. EZELL

DRIVEWAY AT (b) (6) [redacted]



PAGE#: 7
TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO#: 27 DATE: 02/28/90
TIME: 1210 DIRECTION: W
PHOTOGRAPHER: T. NAQUIN/M. EZELL

INSIDE SHED AT (b) (6) [redacted]

PHOTO#: 28 DATE: 02/28/90
TIME: 1036 DIRECTION: NW
PHOTOGRAPHER: T. NAQUIN/M. EZELL

DRIVEWA (b) (6) [redacted]

PAGE#: 8
TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO#: 29 DATE: 03/07/90
TIME: 1608 DIRECTION: DOWN
PHOTOGRAPHER: T. NAQUIN/M. EZELL

SUSPECT WHITE ACM AT THE LANDFILL ON LAPALCO BLVD

PHOTO#: 30 DATE: 03/07/90
TIME: 1612 DIRECTION: DOWN
PHOTOGRAPHER: T. NAQUIN/M. EZELL

BLACK ROOFING MATERIAL AT THE LANDFILL ON LAPALCO BLVD

PAGE#: 9
TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO#: 31 DATE: 03/07/90
TIME: 1612 DIRECTION: DOWN
PHOTOGRAPHER: T. NAQUIN/M. EZELL

PIECES OF TRANSITE BOARD AT THE LANDFILL ON LAPALCO BLVD

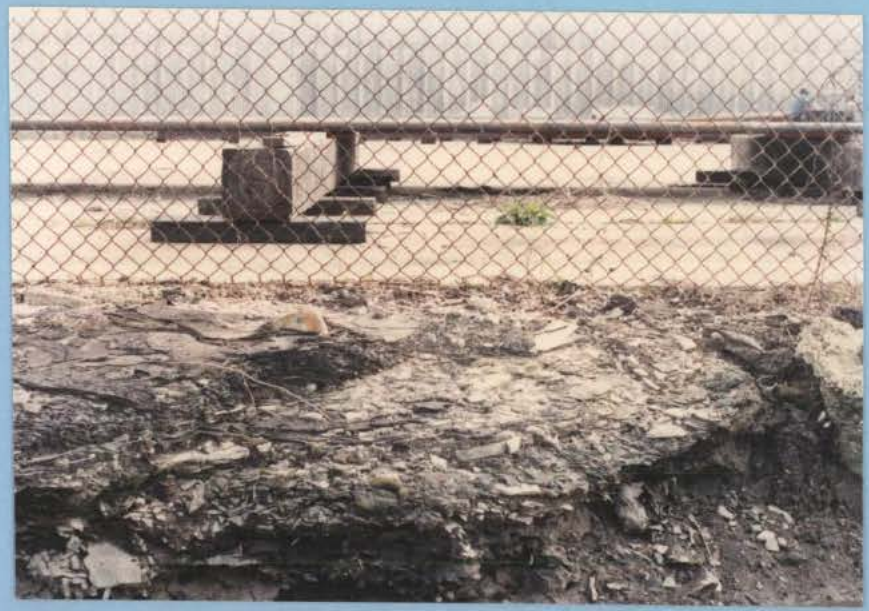
PHOTO#: 32 DATE: 03/07/90
TIME: 1616 DIRECTION: DOWN
PHOTOGRAPHER: T. NAQUIN/M. EZELL

ROOFING AND TRANSITE BOARD MATERIALS AT THE LANDFILL ON LAPALCO BLVD

PAGE#: 10
TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO#: 33 DATE: 03/08/90
TIME: 1503 DIRECTION: SW
PHOTOGRAPHER: T. NAQUIN/M. EZELL

PIPEYARD NEAR JOHNS-MANVILLE ON RIVER ROAD



PHOTO#: 34 DATE: 03/08/90
TIME: 1502 DIRECTION: SE
PHOTOGRAPHER: T. NAQUIN/M. EZELL

ROOFING MATERIAL OUTCROPPING BY THE PIPEYARD DITCH ON RIVER ROAD

PAGE#: 11
TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO#: 35 DATE: 03/08/90
TIME: 1502 DIRECTION: SE
PHOTOGRAPHER: T. NAQUIN/M. EZELL

ROOFING MATERIAL OUTCROPPING BY THE PIPEYARD DITCH ON RIVER ROAD

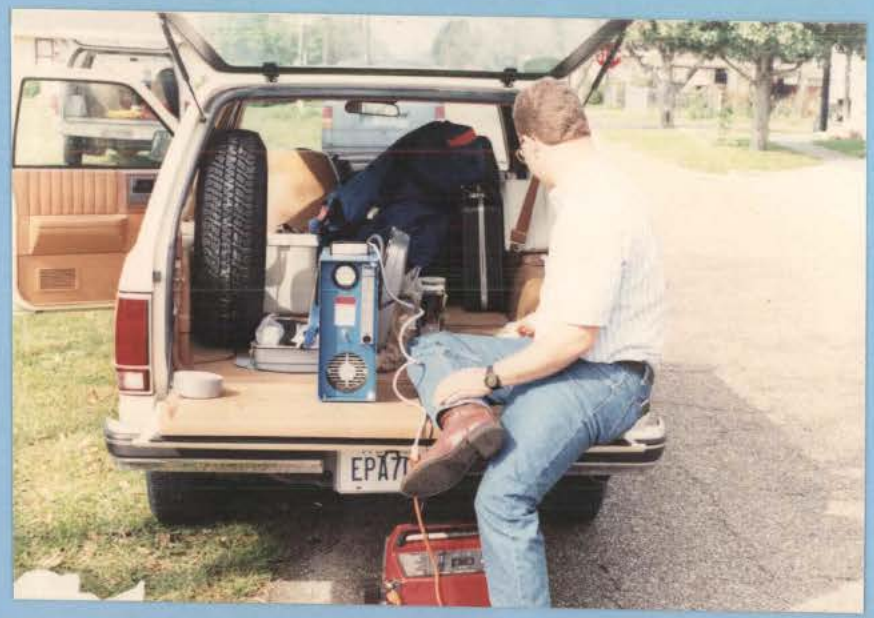
PHOTO#: 36 DATE: 03/08/90
TIME: 1502 DIRECTION: S
PHOTOGRAPHER: T. NAQUIN/M. EZELL

BLACK, LAYERED ROOFING MATERIAL OUTCROPPING AT PIPEYARD DITCH ON RIVER ROAD

PAGE#: 12
TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO#: 37 DATE: 03/07/90
TIME: 1309 DIRECTION: E
PHOTOGRAPHER: T. NAQUIN/M. EZELL

GILIAN PUMPS SAMPLING 15 L/min



PHOTO#: 38 DATE: 03/07/90
TIME: 1034 DIRECTION: NW
PHOTOGRAPHER: T. NAQUIN/M. EZELL

CALIBRATION OF PUMPS WITH GILIBRATOR

PAGE#: 13
TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO#: 39 DATE: 03/07/90
TIME: 1311 DIRECTION: SE
PHOTOGRAPHER: T. NAQUIN/M. EZELL

AIR SAMPLING A (b) (6)

PHOTO#: 40 DATE: 03/07/90
TIME: 1307 DIRECTION: E
PHOTOGRAPHER: T. NAQUIN/M. EZELL

ACM AREA IN BA (b) (6)
BEING SAMPLED

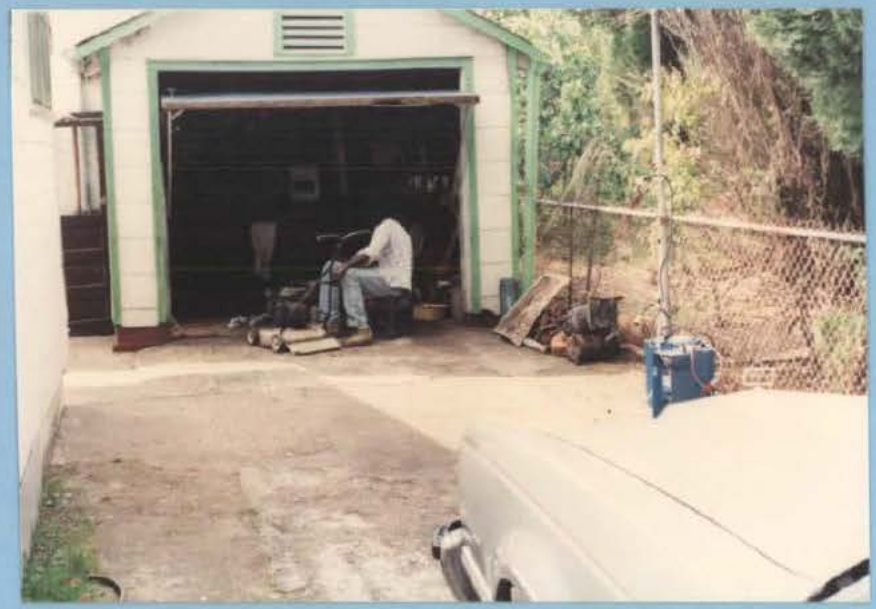
PAGE#: 14
TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO#: 41 DATE: 03/07/90
TIME: 1305 DIRECTION: S
PHOTOGRAPHER: T. NAQUIN/M. EZELL

AIR SAMPLING A (b)(6) [redacted]

PHOTO#: 42 DATE: 03/08/90
TIME: 1410 DIRECTION: W
PHOTOGRAPHER: T. NAQUIN/M. EZELL

AUTOMOBILES IN DRIVEWAY (b)(6) [redacted]
STREET



PAGE#: 15
TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO#: 43 DATE: 03/08/90
TIME: 1410 DIRECTION: W
PHOTOGRAPHER: T. NAQUIN/M. EZELL

(b) (6) [redacted] WORKING ON LAWMMOWERS

PHOTO#: 44 DATE: 02/28/90
TIME: 1212 DIRECTION: NW
PHOTOGRAPHER: T. NAQUIN/J. SHARP

ACM FOUND IN BACKYARD OF (b) (6) [redacted]
STREET

PAGE#: 16
TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO#: 45 DATE: 02/28/90
TIME: 1206 DIRECTION: N
PHOTOGRAPHER: T. NAQUIN/E. EZELL

REAR OF DRIVEWAY NEAR SHED (b) (6) [redacted] (b) (6) [redacted] STREET

PHOTO#: 46 DATE: 03/08/90
TIME: 1033 DIRECTION: S
PHOTOGRAPHER: T. NAQUIN/M. EZELL

FRONT AREA/UPWIND SAMPLE LOCATIONS AT (b) (6) [redacted] EET

PAGE#: 17
TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO#: 47 DATE: 03/08/90
TIME: 1035 DIRECTION: NW
PHOTOGRAPHER: T. NAQUIN/M. EZELL

DRIVEWAY AT (b) (6) [redacted] EET DOWNWIND
SAMPLE LOCATION

PHOTO#: 48 DATE: 03/08/90
TIME: 1035 DIRECTION: S
PHOTOGRAPHER: T. NAQUIN/M. EZELL

BACKYARD/DOWNWIND SAMPLE (b) (6) [redacted]
STREET

PAGE#: 18
TDD#: 06-9010-54C
SITE NAME: WESTBANK ASBESTOS

PHOTO#: 49 DATE: 03/09/90
TIME: 1025 DIRECTION: E
PHOTOGRAPHER: T. NAQUIN/M. EZELL

(b) (6) [redacted] ET

ATTACHMENT D
Aerial Photograph

T06-9010-54C

ATTACHMENT E
Unused Photographs and Negatives

T06-9010-54C

ATTACHMENT F
Record of Communication
(51 Pages)

T06-9010-54C

PHONE CONVERSATION RECORD

Conversation with:

Name John Martin - OSC

Company EPA - Region 6

Address 1445 Ross Avenue
Dallas, TX 75202

Phone (214) 655-2270

Subject West Bank Asbestos

Date 2 / 7 / 90

Time 15 00 AM/PM

TAT Name Troy M. Naquin

PAN NO. TLA 0375 SAA
TDD NO. 06-9002-08

Notes: John Martin OSC Region 6 called to inform TAT of his arrival time and he will schedule meeting with DEQ at 12:30 2-8-90

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-1

000225.031

PHONE CONVERSATION RECORD

Conversation with:

Name Chris Guerra ATATL

Company Ecology & Environment

Address 1509 Main St

Dallas, TX 75201

Phone (214) 742-6601

Date 2 / 8 / 90

Time 0900 AM/PM

TAT Name Jorge R. Naguin

PAN NO. TLA0375SAA

TDD NO. 06-9002-08

Subject Available equipment for asbestos air monitoring

Notes: Chris Guerra Dallas ATATL informed TAT Jorge Naguin of what resources are available asbestos air monitoring. Guerra inform TAT that we had 4 option: ① Buy our own which is already in the works, ② contact ERT to conduct the project, ③ call Buffalo E&E, or ④ Rent them. TAT Naguin also request ATATL to send a copy of the E&E SOP for asbestos

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-2

PHONE CONVERSATION RECORD

Conversation with:

Name Chris Quinn

Company E&E

Address 1509 Main St
Dallas, TX 75201

Phone (214) 742-6601

Subject PAN number for West Bank Asbestos

Date 2 / 9 / 90

Time 0900 AM/PM

TAT Name Troy N. Naquin

PAN NO. TLA 0375 SAA

TDD NO. 06-9002-08

Notes: call to get PAN number for West Bank Asbestos project. Quinn informed TAT that the PAN number is TLA Ø375 SAA.

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-3

000225.033

PHONE CONVERSATION RECORD

Conversation with:
Name Kenneth Lamia
Company Dept. of Public Health
Address P.O. Box 60630
New Orleans, LA 70160
Phone (504) 568-8536
Subject West Bank Asbestos

Date 2 / 9 / 90
Time 1435 AM/PM

TAT Name Troy M. Naquin

PAN NO. TLA 0375SAA
TDD NO. 06-9002-08

Notes: Called Mr. Lamia to make sure to check with EPA Public Relations before release the press release about the West Bank asbestos project.

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-4

PHONE CONVERSATION RECORD

Conversation with:
Name Debra Bentley
Company LDEQ
Address 11720 Airline Highway
Baton Rouge, LA 70817
Phone (504) 295-8900
Subject West Bank Asbestos Project

Date 2/8/90
Time 1448 AM/PM

TAT Name Roger Naquin
PAN NO. TLA 0375 SAA
TDD NO. 06-9002-08

Notes: Will call back

CC:

Follow-Up-Action:

PHONE CONVERSATION RECORD

Conversation with:

Name Debra Bendily

Company LDEQ - Air Quality

Address 11720 Airline Highway
Baton Rouge, LA 70817

Phone (504) 295-8900

Subject West Bank Asbestos project

Date 2 / 9 / 90

Time 15 10 AM/PM

TAT Name Troy M. Naquin

PAN NO. TLA0375SAA

TDD NO. 06-9002-08

Notes: Called to inform TAT about the West Bank asbestos project. TAT requested information about

① Air & Bulk sample method - used PLM for both

② Copy of report - will be finished next week and a copy will be sent to TAT

③ Bulk sample results - 3 of 10 are finished of detailed analysis - her hood is down ∴ other samples will not be finished until next week

④ Air sample data - copy will be sent

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-6

000225.036

PHONE CONVERSATION RECORD

Conversation with:

Name John Martin - OSC

Company EPA - Region 6

Address 1445 Ross Avenue
Dallas, TX 75202

Phone (214) 655-2270

Subject West Bank Asbestos

Date 2 / 12 / 90

Time 11 15 AM/PM

TAT Name Joseph Naguin

PAN NO. TLA0375SAA
TDD NO. 06-9002-08

Notes: TAT Naguin report to John Martin about the methodology used for air & bulk sampling for asbestos as report by Debra Bendily of DEQ Air Quality Division. John Martin requested TAT to stay put till further notice

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-7

PHONE CONVERSATION RECORD

Conversation with:

Name John Martin - OSC

Company EPA Region 6

Address 1445 Ross Avenue
Dallas, TX 75202

Phone (214) 655-2270

Date 2 / 13 / 90

Time 0810 AM/PM

TAT Name Troy M. Noguin

PAN NO. TLA0375SAA
TDD NO. 06-9002-08

Subject West Bank Asbestos air monitoring

Notes: John Martin OSC called to inform TAT to investigate the type of pumps and minimum volume used to collect the air sample. Find out what resources the state has and what type of lab accediation they have.

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-8

000225.038

PHONE CONVERSATION RECORD

Conversation with:
Name Debra Bandily
Company LDEQ - Air Quality
Address 1720 Airline Highway
Baton Rouge, LA 70817
Phone 295-8950
Subject West Bank Asbestos

Date 2 / 13 / 90
Time 0835 AM/PM

TAT Name Troy M. Nguyen

PAN NO. TLA0375SAA
TDD NO. 06-9002-08

Notes: TAT attempted to contact Debra Bandily result was no answer.

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-9

PHONE CONVERSATION RECORD

Conversation with:
Name Debra Bentley
Company LDEQ - Air Quality
Address 11720 Airline Highway
Baton Rouge, LA 70817
Phone 295-8950
Subject West Bank Asbestos

Date 2/13/90
Time 0904 AM/PM

TAT Name Troy M. Naquin
PAN NO. TLA08765AA
TDD NO. 06-9002-08

Notes: TAT Naquin called LDEQ analyst Debra on information about the resources and technique used for air monitoring at the West Bank Asbestos site. Debra reported to TAT that they use Hardi Vol 2000 and pull at a volume rate of .28 cubic ft/min

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-10

000225.040

PHONE CONVERSATION RECORD

Conversation with:
Name John Martin OSC
Company EPA Region 6
Address 1445 Ross Avenue
Dallas TX 75202
Phone (214) 655-2270
Subject West Bank Asbestos

Date 2 / 13 / 80
Time 0909 AM/PM

TAT Name Troy M. Naguin
PAN NO. TLA03755AA
TDD NO. 06-9002-08

Notes: OSC John Martin reported to TAT what ~~that~~ he discovered from Region 1. Region 1 said they used the Toxicology Profile for Asbestos ATSDR (Health Effect) & they tested for friability by touch and tested for dust. John requested TAT to visit LDEQ air quality and get info from Debra Bentley.

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-11

PHONE CONVERSATION RECORD

Conversation with:
Name John Martin - OSC
Company EPA Region 6
Address 1445 Ross Avenue
Dallas, TX 75202
Phone (214) 655-2270
Subject West Bank Asbestos

Date 2/13/90
Time 10:25 AM/PM

TAT Name Troy M. Naguin
PAN NO. TLA0375SAA
TDD NO. 06-9002-08

Notes: TAT called to info John Martin OSC that Debra Bentley of LDEQ - Air Quality will send all information on the West Bank Asbestos project when finished

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-12

000225.042

PHONE CONVERSATION RECORD

Conversation with:

Name Debra Bailey

Company LDEQ - Air Quality

Address 11720 Airline Highway
Baton Rouge, LA 70817

Phone 295-8950

Subject West Bank Asbestos

Date 2 / 15 / 90

Time 0909 AM/PM

TAT Name Troy M. Naquin

PAN NO. TLA0375SAA
TDD NO. 06-9002-08

Notes: Sample results will be the official report and Debbie requested TAT to send Ken Sonia of DHH a copy of the sample

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-13

PHONE CONVERSATION RECORD

Conversation with:

Name John Martin OSC

Company EPA Region 6

Address 1445 Ross Avenue
Dallas, TX 75202

Phone (214) 655-2270

Subject West Bank Asbestos

Date 2/15/90

Time 1240 AM/PM

TAT Name Jerry M. Naguin

PAN NO. TLA8375SAA

TDD NO. 06-9002-08

Notes: John Martin called TAT Naguin to inform him that TAT would be conducting air monitoring for asbestos with possible assistance from ERT. John also will be sending a new guidance book to TAT for review. John requested TAT to call Todd Thibodeaux about aerial photos. John would be coming down to Baton Rouge soon.

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-14

PHONE CONVERSATION RECORD

Conversation with:

Name Todd Thibodeaux

Company LDEQ - Inactive & Abandoned Site

Address P.O. Box 44066 - Capitol Station
Baton Rouge LA

Phone (504) 342-8925

Subject West Bank Asbestos

Date 2 / 15 / 90

Time 1555 AM/PM

TAT Name Troy M. Naquin

PAN NO. TLA0375SAA

TDD NO. 06-9002-08

Notes: attempt to contact Todd about aerial photo of the West Bank area. Todd is not in, will return call.

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-15

000225.045

PHONE CONVERSATION RECORD

Conversation with:

Name LDEQ secretary

Company LDEQ-Inactive & Abandoned Sites

Address P.O. Box 44066

Baton Rouge, LA 70804

Phone (504) 342-8925

Subject West Bank Asbestos

Date 2/22/90

Time 1500 AM/PM

TAT Name Troy M. Naquin

PAN NO. TLA0375SAA

TDD NO. 06-9002-08

Notes: attempted to contact Todd Thibodeaux of DEQ Inactive & Abandoned sites about aerial photo of the West Bank area - Jefferson Parish - Todd was not available - will return call

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-16

PHONE CONVERSATION RECORD

Conversation with:
Name EPA Secretary
Company EPA Region 6
Address 1445 Ross Avenue
Dallas, TX 75202
Phone (214) 655-2270
Subject West Bank Asbestos

Date 2 / 22 / 90
Time 1503 AM/PM

TAT Name Troy M. Naguin
PAN NO. TLA0375SAA
TDD NO. 06-9002-08

Notes: attempted to contact John Martin OSC about the West Bank Asbestos - John was on another line

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-17

PHONE CONVERSATION RECORD

Conversation with:

Name John Martin - OSC

Company EPA Region 6

Address 1445 Ross Avenue

Dallas, TX 75202

Phone (214) 655-2275

Subject West Bank Asbestos

Date 2 / 22 / 90

Time 1643 AM/PM

TAT Name Troy M. Naguin

PAN NO. TLA0376SAA

TDD NO. 06-9002-08

Notes: EPA will help but TAT will have document the project. TAT will help setup of lab if data is useful to EPA. John OSC told TAT to let state offer help and TAT participate.

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-18

PHONE CONVERSATION RECORD

Conversation with:
Name Todd Thibodeaux
Company LDEQ - Inactive & Abandoned Site
Address P.O. Box 44066 - Capitol Station
Baton Rouge, LA 70804
Phone 342-8925

Date 2 / 23 / 90
Time 1051 AM/PM
TAT Name Troy M. Naquin
PAN NO. TLA0375SAA
TDD NO. 06-9002-08

Subject West Bank Asbestos

Notes: TAT Naquin contact Todd Thibodeaux of LDEQ about aerial photos of the West Bank area. Todd was unable to make contact due to another project out of town. TAT was able to get a contact from Todd about the aerial photos
DOTD
Willie E Price
Rm 110
Phone # 379-1131

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-19

PHONE CONVERSATION RECORD

Conversation with:

Name Steve Scarbaough

Company LDEQ - Air Quality

Address 11720 Airline Highway
Baton Rouge, LA 70817

Phone (504) 295-8900

Subject West Bank Asbestos

Date 2 / 23 / 90

Time 1348 AM/PM

TAT Name Troy M. Naquin

PAN NO. TLA0375SAA
TDD NO. 06-9002-08

Notes: Steve of LDEQ called to get the bid for laboratory analysis from TAT, wanted to know scope of service. TAT Naquin explain to Steve that the manifold arrangement discussed earlier at the meeting will not work. Therefore, 6 pumps will be used.

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-20

000225.050

PHONE CONVERSATION RECORD

Conversation with:

Name Chris Quinn

Company E&E - Dallas

Address 1509 Main St
Dallas, TX 75201

Phone (214) 742-6601

Subject West Bank Asbestos

Date 2 / 23 / 90

Time 1405 AM/PM

TAT Name Troy M. Raquin

PAN NO. TLA0375SAA

TDD NO. 06-9002-08

Notes: TAT Raquin called ATATL Quinn about pumps available, 6 pumps are presently available & Quinn will be flying down to assist.

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-21

000225.051

PHONE CONVERSATION RECORD

Conversation with:

Name Steve Scarbrough

Company LDEQ - Air Quality

Address 11720 Airline Highway
Baton Rouge, LA 70817

Phone (504) 295-8900

Subject West Bank Asbestos

Date 2 / 23 / 90

Time 1532 AM/PM

TAT Name Troy M. Naquin

PAN NO. TLA0375SAA

TDD NO. 06-9002-08

Notes: TAT Naquin called Steve to inform him that bags were available & 4 more will be coming in.

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-22

PHONE CONVERSATION RECORD

Conversation with:
Name Chris Quinn
Company E&E Dallas
Address 1509 main st
Dallas, TX 75201
Phone (214) 742-6601
Subject West Bank Asbestos

Date 2 / 26 / 90
Time 0942 AM/PM

TAT Name Troy M. Naguin
PAN NO. TLA03755AA
TDD NO. 06-9002-08

Notes: Chris called to inform TAT Naguin that 6 pumps and 5 generators are available. Chris will ship 6 pumps & 3 generators today. He will call later for his travel plans.

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-23

PHONE CONVERSATION RECORD

Conversation with:

Name John Martin - OSC

Company EPA Region 6

Address 1445 Ross Avenue

Dallas, TX 75202

Phone (214) 655 - 2275

Subject West Bank Asbestos

Date 2 / 26 / 90

Time 1000 AM/PM

TAT Name Troy M. Naguin

PAN NO. TLA0375SAA

TDD NO. 06-9002-08

Notes: TAT Naguin attempted to contact John Martin OSC he was unavailable at this time, he may be out of town

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-24

PHONE CONVERSATION RECORD

Conversation with:
Name Patrick O'Niel
Company DOTD
Address 1201 Capitol Access Rd
Baton Rouge, LA 70804
Phone (504) 379-1131
Subject West Bank Asbestos

Date 2/26/90
Time 1050 AM/PM

TAT Name Troy M. Naquin
PAN NO. TLA0375SAA
TDD NO. 06-9002-08

Notes: TAT attempted to contact Willis Price, who was unavailable, however, TAT spoke to Patrick O'Niel who is charge of records for aerial photos. Mr. O'Niel will research as see if historic photo from 1955-65' are avaible per TAT request. Mr. O'Niel will call back.

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-25

PHONE CONVERSATION RECORD

Conversation with:
Name Eric Jeansonne
Company DOTD
Address 1201 Capitol Access Rd
Baton Rouge, LA 70804
Phone (504) 379-1131
Subject West Bank Asbestos

Date 2/26/90
Time 1103 AM/PM

TAT Name Troy M. Naquin
PAN NO. TLA0375SAA
TDD NO. 06-9002-08

Notes: Eric Jeansonne of DOTD called to inform TAT that photos before 1962 were not available however, photo of the general area is available. TAT would have to go down and look at their film (aerial photos) available. Mr. Jeansonne told TAT to contact Mrs. Sandy Rm 115 at the DOTD Bldg to get photos. Mr. Jeansonne also informed TAT that aerial photos of the area in question could be found from the Agriculture Dept in the Federal Bldg or from the Geo-science library at LSU.

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-26

000225.056

PHONE CONVERSATION RECORD

Conversation with:
Name Steve Scarbrough
Company LDEQ - Air Quality
Address 11720 Airline Highway
Baton Rouge, LA
Phone (504) 295-8900
Subject West Bank Asbestos

Date 2 / 26 / 90
Time 11 25 AM/PM

TAT Name Troy M. Naquin
PAN NO. TLA03765AA
TDD NO. 06-9002-08

Notes: Steve was unavailable, will return call

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-27

PHONE CONVERSATION RECORD

Conversation with:
Name John Martin OSC / Reagan Boyles
Company EPA Region 6
Address 1445 Ross Avenue
Dallas, TX 75202
Phone (214) 655-2275
Subject West Bank Asbestos

Date 2/28/90
Time 1655 AM/PM

TAT Name Troy M. Naguin

PAN NO. TLA0376SAA
TDD NO. 06-9002-08

Notes: TATs Troy Naguin, Steve Preiss D.R. ATATL, Chris Guina Dallas ATATL, and Mark Ezell informed EPA OSC John Martin of the current situation with the West Bank Asbestos Project. TAT Naguin informed the OSC of the scan conducted today with LDEQ personnel for the selection of three locations to conduct air sampling. In addition, EPA was informed of asbestos material found at the Sa Palco dump site. Air sampling will be conducted next week with EOC equipment purchased by Chris Guina for TAT use. John Martin was also informed that the QUASA will be finished tomorrow and the laboratory support will be finished Friday. OSC requested TAT to also pull 5 bulk samples to be submitted for analysis.

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-28

000225.058

PHONE CONVERSATION RECORD

Conversation with:
Name John Martin OSC
Company EPA Region 6
Address 1445 Ross Avenue
Dallas, TX 75202
Phone (214) 655-2275
Subject West Bank Asbestos

Date 03 / 01 / 90
Time 1415 AM/PM

TAT Name Troy M. Naquin
PAN NO. TLA0376SAA
TDD NO. 06-9002-08

Notes: TAT called to inform the OSC that the QUASP would be sent by E mail 9673. OSC decided to pull 8 bulk samples instead of 5 ~~bulk~~ requested yesterday. OSC tasked TAT to sent QUASP by Fed Ex for Monday 4 March 1990. In addition, the OSC will be flying in on Tuesday night pending on the weather.

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-29

000225.059

PHONE CONVERSATION RECORD

Conversation with:
Name John Martin - OSC
Company EPA Region 6
Address 1445 Ross Avenue
Dallas, TX 75202
Phone (214) 655-2275
Subject West Bank Asbestos

Date 3 / 5 / 90
Time 0814 AM/PM

TAT Name Troy M. Naguin
PAN NO. TLA0375SAA
TDD NO. 06-9002-08

Notes: TAT informed EPA OSC John Martin about aerial photos - found on for 1976, DOTD doesn't have any prior to '76. TAT will go thru US Dept of Ag to get photos, if available. Only 6 pumps will be available ∴ 1 station/location a day can be sampled. John Martin will fly in Tuesday afternoon. PCLREPS will begin Friday

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-30

000225.060

PHONE CONVERSATION RECORD

Conversation with:

Name Bob Hannah

Company LDEQ - Air Quality

Address 11720 Airline Highway
Baton Rouge, LA 70817

Phone (504) 295-8900

Subject West Bank Asbestos

Date 3 / 05 / 90

Time 1300 AM/PM

TAT Name Troy M. Naquin

PAN NO. TLA0375SAA
TDD NO. 06-9002-08

Notes: TAT called to inform Bob Hannah of LDEQ Air Quality that TAT & EPA will be sampling Wednesday 7 March 1990. Air sampling will be conducted in level D however bulk will be in level C. In addition, Hannah was informed that the EPA request the state to track all potential sites of asbestos contamination and rank their degree of threat. Bob Hannah informed TAT that it would fall under inactive & abandoned site division of LDEQ. Bob will contact Gus von Bodungen about the ranking and call TAT back

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-31

000225.061

PHONE CONVERSATION RECORD

Conversation with:
Name John Martin - OSC
Company EPA Region 6
Address 1445 Ross Avenue
Dallas, TX 75202
Phone (214) 655-2275
Subject West Bank Asbestos

Date 3 / 5 / 90
Time 1505 AM/PM

TAT Name Craig M. Naquin
PAN NO. TLA0375SAA
TDD NO. 06-9002-08

Notes: John Martin OSC called to inform TAT that the state was concerned about TAT being in Level C for the air & bulk sampling. TAT informed OSC that TAT could be in Level D for air sampling, but Level C for the collection of bulk. Therefore, the OSC decided not to collect bulk and state was wondering why we weren't sampling now. OSC explained that the sampling plan, lab support, and equipment support would take a few day. TAT & EPA would be ready to go Wednesday. OSC decided to go Wednesday.

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-32

000225.062

PHONE CONVERSATION RECORD

Conversation with:
Name John Martin - OSC
Company EPA Region 6
Address 1445 Ross Avenue
Dallas, TX 75202
Phone (214) 655-2275
Subject West Bank Asbestos

Date 3 / 6 / 90
Time 0814 AM/PM

TAT Name Troy M. Naguin

PAN NO. TLA0375SAA
TDD NO. 06-9002-08

Notes: John Martin OSC called to inform TAT that if it rains tonight or tomorrow morning to scrub the air sampling mission. TAT is to contact state if mission is scrubed. John Martin will fly in Wednesday morning, weather permitting.

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-33

000225.063

PHONE CONVERSATION RECORD

Conversation with:
Name LDEQ Secretary
Company LDEQ - Inactive & Abandoned Site
Address P.O. Box 44066 - Capitol Station
Baton Rouge, LA 70804
Phone (214) 655-2270
Subject West Bank Asbestos

Date 3 / 6 / 90
Time 1050 AM/PM

TAT Name Troy M. Naquin
PAN NO. TLA0375SAA
TDD NO. 06-9002-08

Notes: TAT attempted to contact Todd Thibodeaux about EPA request ~~to~~ for the state to rank the site and the extent of contamination from the asbestos. Todd was not in, TAT left message

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-34

000225.064

PHONE CONVERSATION RECORD

Conversation with:
Name Steve Scarborough
Company LDEQ - Air Quality
Address 11720 Airline Highway
Baton Rouge, LA 70817
Phone (504) 295-8900
Subject West Bank Asbestos

Date 3/06/90
Time 1445 AM/PM

TAT Name Troy M. Naquin
PAN NO. TLA0376SAA
TDD NO. 06-9002-08

Notes: TAT called to inform DEQ that the sampling mission will be scheduled for tomorrow 7 March 1990 pending weather conditions. LDEQ will meet TAT 0700 tomorrow in front of the EPE office bldg and depart for the West Bank of New Orleans

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-35

PHONE CONVERSATION RECORD

Conversation with:
Name John Martin - OSC
Company EPA Region 6
Address 1445 Ross Avenue
Dallas, TX 75202
Phone (214) 655-2275
Subject West Bank Asbestos

Date 03/06/90
Time 1625 AM/PM

TAT Name Troy M. Naquin
PAN NO. TLA0376SAA
TDD NO. 06-9002-08

Notes: TAT called John Martin, however the OSC (John Martin) was away from his desk. TAT left message to return call

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-36

PHONE CONVERSATION RECORD

Conversation with:
Name John Martin OSC
Company EPA Region 6
Address 1445 Ross Avenue
Dallas, TX 75202
Phone (214) 655-2275
Subject West Bank Asbestos

Date 3 / 6 / 90
Time 1630 AM/PM

TAT Name Troy M. Naquin
PAN NO. TLA0376SAA
TDD NO. 06-9002-08

Notes: John Martin OSC called to inform TAT that he will contact TAT Naquin at home around 0600 tomorrow March 7 1990 for weather conditions. If it is raining OSC will not travel to New Orleans and TAT will not conduct air sampling missions. OSC also requested TAT to take out information about bulk samples on the QASP and that the info on the QASP for air sampling was O.K.

CC:

Follow-Up-Action:

PHONE CONVERSATION RECORD

Conversation with:
Name Mike McDaniel, PhD
Company LDEQ Air Div.
Address Baton Rouge, La

Phone

Subject Westbank Asbestos

Date 4, 17, 90
Time 1000 AM/PM

TAT Name RSPiera

PAN NO. TLA0375SAA
TDD NO. 06-9002-08

Notes: Spoke to Mike about Westbank Asbestos Project. He was not well informed on status or sample results due to loss of Bob Hannah. I told him all air samples were negative and that we could provide assistance on ranking & where to go from here, if OSC approved. He will meet w/his people and get back w/me on when we could get together w/LDEQ to review data.

RSPiera

CC: Troy Naguin - FYI

Follow-Up-Action: When we hear back from Mike, call OSC Martin to update & for direction.

recycled paper

ecology and environment

F-38

000225.068

PHONE CONVERSATION RECORD

Conversation with:
Name John Martin
Company EPA Region 6 (OSC)
Address 1445 Ross Avenue
Dallas, TX 75202
Phone (215) 655-2275
Subject Westbank Asbestos Project

Date 06 / 11 / 90
Time 4:17 AM/PM

TAT Name Joyce Naguin

PAN NO. TLA037SSAA
TDD NO. 06-9002-08

Notes: John Martin (OSC Region 6) informed TAT Naguin that bulk and agressive air sampling will be conducted in July or August 1990 at the Jefferson Parish asbestos site. John Martin will contact LDEQ officials to inform them of TAT's & EPA's future work plans.

CC:

Follow-Up-Action:

recycled paper

ecology and environment

F-39

TROY M. NAQUIN
Print Originator's Name
Ecology and Environment, Inc.

RECORD OF COMMUNICATION

Conversation with:

Name John Martin OSC
Address 1445 Ross Avenue
Dallas, TX 75202
Phone 214 - 655-2275
(Area Code) (Number)

Date 06 / 28 / 90
(Mo) (Day) (Year)
Time 1334 AM/PM
[✓] Originator Placed Call
[ ] Originator Received Call

TDD# 06-9002-08 PAN# TLA0375SAA

Subject WESTBANK ASBESTOS PROJECT

Discussion: TAT Naquin phoned EPA Region 6 OSC John Martin regarding the amendment of the Westbank Asbestos Technical Direction Document (TDD). OSC Martin approved amending the TDD for time of completion till the end of the TAT contract. In addition, TAT requested the QASP for the Westbank Asbestos Project be returned for revision.

OSC Martin informed TAT that the next sampling mission for the Westbank may be conducted in early August.

Follow-Up-Action:

Originator's Signature: Troy M. Naquin

(RWG 6/90)

F-40

TROY M. NAQUIN
Print Originator's Name
Ecology and Environment, Inc.

RECORD OF COMMUNICATION

Conversation with:

Name John Martin - OSC
Address 1445 Ross Avenue
Dallas, Tx 75202
Phone 214 - 655-2275
(Area Code) (Number)

Date 09 / 10 / 90
(Mo) (Day) (Year)
Time 10:15 AM/PM
[✓] Originator Placed Call
[ ] Originator Received Call

TDD# 06-9002-08 PAN# TLA0375SAA

Subject WESTBANK ASBESTOS PROJECT

Discussion: John Martin tasked TAT Naquin to contact LDEQ assistant Secretary Mike McDaniel on the status of the Westbank Asbestos site. TAT also requested an amendment of the Westbank TDD which was granted.

Follow-Up-Action:

Originator's Signature: Troy M. Naquin

(RWG 6/90)

F-41

TROY M. NAQUIN
Print Originator's Name
Ecology and Environment, Inc.

RECORD OF COMMUNICATION

Conversation with:

Name Todd Thibodeaux
Address P.O. Box 44066 - Capitol Station
Baton Rouge, La. 70804
Phone 504 - 342-8925
(Area Code) (Number)

Date 09 / 10 / 90
(Mo) (Day) (Year)
Time 10:40 AM/PM
[✓] Originator Placed Call
[ ] Originator Received Call

TDD# 06-9002-08 PAN# TLA0375SAA

Subject WESTBANK ASBESTOS PROJECT

Discussion: TAT discussed the Westbank project with Todd Thibodeaux. The site has been assigned to him (Todd Thibodeaux) but Todd did not know of any action to be taken by LDEQ soon. TAT asked for the name of the head of Inactive and Abandoned Sites - Harold Ethridge. TAT told Todd that he will contact OSC John Martin and transfer the information for EPA to follow up on.

Follow-Up-Action:

Originator's Signature: Troy M. Naquin

(RWG 6/90)

F+42

TROY M. NAQUIN
Print Originator's Name
Ecology and Environment, Inc.

RECORD OF COMMUNICATION

Conversation with:

Name John Martin - OSC EPA Region 6
Address 1445 Ross Avenue
Dallas, TX 75202
Phone 214 - 655 - ~~2270~~ 2275
(Area Code) (Number)

Date 09 / 10 / 90
(Mo) (Day) (Year)
Time 11:00 AM/PM
[✓] Originator Placed Call
[ ] Originator Received Call

TDD# 06-9002-08 PAN# TLA0375SAA

Subject WESTBANK ASBESTOS PROJECT

Discussion: TAT Naquin called OSC John Martin to inform him of the information discovered by TAT in relation to the Westbank Asbestos Project. TAT informed the OSC that Todd Ahlobaird was in charge of the site but, Todd was not aware of any plans by LDEQ on follow up work. TAT asked for the name of the head of Inactive and Abandoned Sites for EPA to contact. Todd informed TAT that Harold Ethridge was in charge and that EPA could contact Mr. Ethridge about the project. In addition, OSC informed TAT of a possible emergency response in Stephensville, La, St Martin Parish of a white milky substance found in the local waterway. OSC tasked TAT to contact Rodney Boudreaux at 504-384-1277 for information about the spill.

Follow-Up-Action:

Originator's Signature: Troy M. Naquin

(RWG 6/90)

F-43

TROY M. NAQUIN
Print Originator's Name
Ecology and Environment, Inc.

RECORD OF COMMUNICATION

Conversation with:

Name John Martin - OSC Region 6
Address 1445 Ross Avenue
Dallas, TX 75202
Phone 214 - 655-2275
(Area Code) (Number)

Date 09 / 17 / 90
(Mo) (Day) (Year)
Time 10:35 AM/PM
[ ] Originator Placed Call
[✓] Originator Received Call

TDD# 06-9002-08 PAN# TLA0375SAA

Subject WESTBANK ASBESTOS PROJECT

Discussion: OSC John Martin called to inform TAT Naquin that he will be in New Orleans on 09-25-90, to discuss and survey the Westbank Asbestos site

---

Follow-Up-Action:

Originator's Signature: Troy M. Naquin

(RWG 6/90)

F-44

TROY M. NAQUIN
Print Originator's Name
Ecology and Environment, Inc.

RECORD OF COMMUNICATION

Conversation with:

Name Todd Thibodeaux
Address P.O. Box 44066-Capitol Station
Baton Rouge, LA 70804
Phone 504 - 342-8925
(Area Code) (Number)

Date 09 / 24 / 90
(Mo) (Day) (Year)
Time 0835 AM/PM
[ ] Originator Placed Call
[✓] Originator Received Call

TDD# 06-9002-08 PAN# TLA0375SAA

Subject WESTBANK ASBESTOS PROJECT

Discussion: TAT Naquin received call from LDEQ representative Todd Thibodeaux on the status of the meeting and briefing on the Westbank site tomorrow. TAT at this time did not know the plans of the OSC, however, TAT would return call to LDEQ when the OSC called in for arrangements of the site visit. Todd Thibodeaux indicated that he had hope to get someone from LDEQ to meet TAT and the OSC in New Orleans.

Follow-Up-Action:

Originator's Signature: Troy M. Naquin

(RWG 6/90)

F-45

TROY M. NAQUIN
Print Originator's Name
Ecology and Environment, Inc.

RECORD OF COMMUNICATION

Conversation with:

Name John Martin - OSC Region 6
Address 1445 Ross Avenue
Dallas, TX 75202
Phone 214 - 655-2275
(Area Code) (Number)

Date 09 / 24 / 90
(Mo) (Day) (Year)
Time 1:00 AM/PM
[ ] Originator Placed Call
[✓] Originator Received Call

TDD# 06-9002-08 PAN# TLA0375SAA

Subject WESTBANK ASBESTOS PROJECT

Discussion: John Martin OSC called to inform TAT Naquin of his arrival time at 10:35 am tomorrow in New Orleans and for TAT to meet him at the airport. TAT, OSC, and LDEQ representative will meet and conduct a drive by of the Westbank site. Also TAT and OSC will conduct drive by of Thompson Hayward site downtown.

Follow-Up-Action:

Originator's Signature: Troy M. Naquin

(RWG 6/90)

F-46

TROY M. NAQUIN
Print Originator's Name
Ecology and Environment, Inc.

RECORD OF COMMUNICATION

Conversation with:

Name Todd Thibodeaux
Address P.O. Box 44066 - Capitol Station
Baton Rouge, LA 70804
Phone 504 - 342 - 8925
(Area Code) (Number)

Date 09 / 24 / 90
(Mo) (Day) (Year)
Time 2:15 AM/PM
[✓] Originator Placed Call
[ ] Originator Received Call

TDD# 06-9002-08 PAN# TLA0375SAA

Subject WESTBANK ASBESTOS PROJECT

Discussion: TAT Naquin called LDEQ representative Todd Thibodeaux of the plans for a site visit of Westbank Asbestos. TAT informed Todd of the arrival time of the OSC at ~10:35 am and his plans to meet with LDEQ at the foot of the Huey P. Long Bridge at 1:00 pm tomorrow Sept. 25, 1990. Todd said he will inform his supervisor to get someone to meet with us.

Follow-Up-Action:

Originator's Signature: Troy M. Naquin

(RWG 6/90)

F-47

000225.077

TROY M. NAQUIN
Print Originator's Name
Ecology and Environment, Inc.

RECORD OF COMMUNICATION

Conversation with:

Name Todd Thibodeaux - LDEQ
Address P.O. Box 44066 - Capitol Station
Baton Rouge, LA 70804
Phone 504 - 342-8925
(Area Code) (Number)

Date 09 / 24 / 90
(Mo) (Day) (Year)
Time 0258 AM/PM
[ ] Originator Placed Call
[✓] Originator Received Call

TDD# 06-9002-08 PAN# TLA0375SAA

Subject WESTBANK ASBESTOS PROJECT

Discussion: Todd Thibodeaux of LDEQ called to inform TAT that nobody from LDEQ would be able to meet with TAT and OSC John Martin tomorrow in New Orleans. TAT recommended to LDEQ that he should meet with OSC John Martin Wednesday afternoon when OSC & TAT return from New Orleans, Todd agreed.

Follow-Up-Action:

Originator's Signature: Troy M. Naquin

(RWG 6/90)

F-48

TROY M. NAQUIN
Print Originator's Name
Ecology and Environment, Inc.

RECORD OF COMMUNICATION

Conversation with:

Name John Martin OSC Region 6
Address 1445 Ross Avenue
Dallas, TX 75202
Phone 214 - 655 - 2275
(Area Code) (Number)

Date 10 / 25 / 90
(Mo) (Day) (Year)
Time 0930 AM/PM
[ ] Originator Placed Call
[ ] Originator Received Call

TDD# E06-9010-054 PAN# ELA0375SAA

Subject Westbank Asbestos

Discussion: OSC Martin is tentatively planning to visit the site around 19 November 1990, to conduct with TAT a risk assessment and possible bulk sampling

Follow-Up-Action:

Originator's Signature: Troy M. Naquin

(RWG 6/90)

F-49

000225.079

TROY M. NAQUIN
Print Originator's Name
Ecology and Environment, Inc.

RECORD OF COMMUNICATION

Conversation with:

Name John Martin - OSC Region 6
Address 1445 Ross Avenue
Dallas, TX 75202
Phone 214 - 655 - 2275
(Area Code) (Number)

Date 09 / 09 / 91
(Mo) (Day) (Year)
Time 1300 AM/PM
[✓] Originator Placed Call
[ ] Originator Received Call

TDD# T06-9010-054C PAN# ELA0375SAA

Subject Westbank Asbestos Project

Discussion: TAT Naquin returned OSC Martin's call. The OSC informed TAT that interest in the Westbank Asbestos Project still remains; however, he still would like TAT to close out the TDD and produce the final report. If possible, try to attain detailed maps of the area for future work that may occur in November. Also, OSC requested TAT to check on the progress, if any, that the Department of Health and ~~Hosp~~ Hospitals discovered during their investigation on cases of asbestosis in the Marrero area.

Follow-Up-Action: Will call Kenneth Sanin at DHH

Originator's Signature: Troy M. Naquin

(RWG 6/90)

F-50

TROY M. NAGVIN
Print Originator's Name
Ecology and Environment, Inc.

RECORD OF COMMUNICATION

Conversation with:

Name Kenneth Sanier, R.S. (DAH)
Address P.O. Box 60630
New Orleans, LA 70160
Phone 504 - 568 - 8536
(Area Code) (Number)

Date 09 / 09 / 91
(Mo) (Day) (Year)
Time 1330 AM/PM
[✓] Originator Placed Call
[ ] Originator Received Call

TDD# T06-9010-54C PAN# ELA0375SAA

Subject Westbank Asbestos Project

Discussion: TAT called Kenneth Sanier at the Dept of Health and Hospitals - Mr. Sanier not in; will return call

16:27 - Mr. Sanier returned TAT's call. TAT asked Mr Sanier if any progress was made on the the asbestos investigation in the Marrero area. Mr. Sanier informed TAT that he was not aware of any work done; however, he will look into it and notify TAT later in any thing has been done.

Follow-Up-Action:

Originator's Signature: Troy M. Nagvin

(RWG 6/90)

F-51

ATTACHMENT G
Copy of Logbook
(Pages 1 - 45)

T06-9010-54C

ecology and environment, inc.

International Specialists in the Environment

Job Number TS1313; TLA0375SAA
ZT1061; ELA0375SAA

TDD# 06-9002-08 / T06-9010-54
West Bank Asbestos
West Bank Area, Jefferson Parish, Louisiana

E & E Job Number TS1313 / 2T1061

Telephone Code Number

Site Name West Bank Asbestos

State/City Louisiana, West Bank, Jefferson Parish

TDD Ø6-9ØØ2-Ø8 / 06-9010-54

PAN ~~FLAØ35~~ TLAØ375SAA/ELAØ375SAA

SSID

Start/Finish Date 2-7-9Ø / 10-22-90

Book 1 of 1

E & E Emergency Response Center: (716) 684-8940

TDD# 06-9002-08 2-7-90

Background

State of Louisiana contacted EPA Emergency Response Branch (ERB) for assistance with a residential asbestos problem in the Westwego-Harvey area, Jefferson Parish, Louisiana. The state requested ERB to provide any resources dealing with asbestos which the state lacks. ERB in turn, contacted EPA Technical Assistance Team (TAT) to provide technical assistance and resources available to the state for addressing the asbestos problem. EPA On-Site Coordinator (OSC) John Martin has been assigned to the project and he plans on meeting with the state of Louisiana officials and TAT on 8, February 1990

Troy M. Naquin

TDD# 06-9002-08 2-8-90

1100 TATs Naquin, Pierce, & Terrell arrive at Baton Rouge Metro Airport and picked up EPA OSC John Martin

1225 TATs and EPA OSC arrive at Dept. of Natural Resources building to hold meeting with the State of Louisiana officials.

1240 Meeting with State of Louisiana officials including Departments of Environmental Quality and Health and Hospitals. Persons attending the meeting were TAT 2-8-90 as follows: Mike McDaniel, DEQ Air Quality & Nuclear Energy; Terry Ryder, DEQ Legal & Enforcement; Todd Thibodeaux, DEQ Inactive & Abandoned Sites; Chris Roberie, DEQ Air Quality & Enforcement; Gus von Bodungen, DEQ Air Quality; Ken Lanier, DHH Office of Public Health; John Martin EPA OSC Region 6; & Steve Pierce, Troy Naquin, Ray Terrell, Ecology and Environment, Inc. (Technical Assistance Team). DEQ officials informed TAT and OSC that 10 bulk samples were taken in the West Bank area and all 10 tested positive for asbestos. Detailed analysis of these 10 bulk samples indicated a composition of 40-50% asbestos. The two species of asbestos involved were 50% Chrysotile and 50% Crocodilite. The 10 bulk samples were taken on 12 January ~~1989~~ 1990. In addition, 1 sample was taken on 29 June 1989 from a driveway on Chipley Street, Westwego, Louisiana. Analysis of this sample indicated 10% Chrysotile and 5% Crocodilite.

One air sample was taken near the Texaco plant on Barataria Blvd and analysis of

Troy M. Naquin

the air sample was below the detection limit. DEQ is trying to purchase additional air monitoring equipment to conduct further air monitoring. DEQ believes the sources of the asbestos containing material (ACM) is from the Johns-~~Mand~~ Manville plant located in Marrero.

Georgia Bryant, Louisiana State Chemical Epidemiologist is conducting a survey of medical records from the Westbank area for any reports of asbestosis. DEQ requested to find if there is any defined public health danger and they believe this could be determined by additional air monitoring. DEQ also requested EPA to recon the Johns-Manville asbestos landfill near the Mississippi River for contamination. EPA OSC Martin informed DEQ that EPA would assess the situation by conducting recon & photodocumentation, collect data and review all options before offering DEQ advice on the situation. DEQ understands that there is a identified problem but the perceived threat is greater than the actual threat. EPA & TAT will collect data and research from a previous model that Region 1 handled under the same situation and report back to DEQ. EPA OSC John Martin decided that TAT and OSC would drive to the West Bank area of New Orleans to conduct a recon of the area. DEQ informed TAT that John Sharp of DEQ Air Quality SE Region would meet TAT at the foot of the Huey P. Long bridge and escort TAT and OSC of a windshield inspection of the West Bank area suspected of asbestos containing material

Troy M. Naquin

1350 Meeting with Louisiana Dept of Environmental Quality ended.

1400 TAT: Troy Naquin and Ray Terrell, OSC John Martin, DHH Ken Lasrier, & DEQ Todd Thibodeaux depart Baton Rouge for the Westwego-Harvey area, Jefferson Parish, Louisiana.

1520 Arrived in New Orleans and meet with John Sharp DEQ Air Quality Southeast Division and Charlie Johnson DHH Office of Public Health Service at the foot of the Huey P. Long Bridge. John Sharp informed TAT and OSC that the asbestos containing material (ACM) in question was distributed to the public between the years 1955 to 1965. The ACM was first pulverized in a hammer mill at the Johns Manville plant and mixed with a filler to form a stable roadbed-like material. The main roads through the area in question was not suspected of containing asbestos, however the driveways to the residential area did contain asbestos. John Sharp informed TAT of three phone number which he could be sacked: Home [redacted] Work (504) 838-5361, & Beeper (504) 338-2133.

1530 Departed meeting area for drive by survey of the Westbank area

1535 Drove through Bridge City and looked at suspected ACM driveways not [redacted] The following address was surveyed [redacted]

Troy M. Naquin

1550 arrived at Johns Manville Plant and Landfill on River Road in Marrero, Louisiana.
1555 Roll 1 Photo 1 - Sign on landfill fence warning of asbestos waste disposal site - N - Yarnell
Photo documentation was conducted with a Nikon N4004 and #2676972 with a Nikon Nikkor 50mm lens
155[redacted] Roll 1 Photos 2-8 Panorama of the Johns Manville Plant - SE to SW - Yarnell
1557 Roll 1 Photo 9 - Johns Manville sign - SE - Yarnell
1558 Roll 1 Photos 10-16 Panorama of the Johns Manville Landfill on the banks of the Mississippi River - NW to NE - Yarnell
1602 Departed levee near Johns Manville Plant for residential survey (windshield)
1610 Roll 1 Photo 17 Sample site #8 at (b) (6) [redacted] in Westwego taken near pavement N/A - Naguin
1614 Roll 1 Photo 18 Driveway at (b) (6) [redacted] suspected of containing asbestos - W - Martin
1616 Roll 1 Photo 19 Roadfill at (b) (6) [redacted] of Sample Site #2 taken near pavement N/A - Martin
1617 Roll 1 Photo 20 (b) (6) [redacted] Shot - N - Martin
1617 Roll 1 Photo 21 [redacted] Shot S - Martin
1623 Roll 1 Photo 22 (b) (6) [redacted] area of suspect ACM - N/A - Martin
1624 Roll 1 Photo (b) (6) [redacted] Shot - S - Martin
1625 TAT and OSC continue to be located for the windshield inspection by John Shaw and Charlie Johnson.

Amy M. Naguin

1635 Roll 2 Photo 1 - Front yard of A[redacted] suspected ACM at (b) (6) [redacted] in Marrero, LA W - Martin
1636 Roll 2 Photo 2 (b) (6) [redacted] Sample Site #6) and (b) (6) [redacted] front yard and driveway S - Martin
1645 Roll 2 Photo [redacted] (b) (6) [redacted] between (b) (6) [redacted] Sample Site #9) - front lot of Johns Manville Plant N to NE & NW - Martin
1650 Roll 2 Photo 6 - (b) (6) [redacted] Sample Site #5) of ACM in driveway - W - Martin
1653 Roll 2 Photo 7 - (b) (6) [redacted] in Marrero (Sample Site 4) of ACM in driveway - E - Martin
1653 Roll 2 Photo 8 (b) (6) [redacted] N - Martin
1655 Roll 2 Photo 9 (b) (6) [redacted] - suspect ACM in driveway [redacted] with asphalt - W - Martin
1658 Roll 2 Photo 10 (b) (6) [redacted] (Sample Site #10) in Marrero of Government home [redacted]
1659 Roll 2 Photo 11 - Roadedge near (b) (6) [redacted] near Sample Site #10 - W - Martin
1700 Roll 2 Photo 12 & 13 - Sample Site #10 of ACM at (b) (6) [redacted] in driveway of (b) (6) [redacted] - N - Martin
1704 Roll 2 Photo 14 (b) (6) [redacted] - suspect ACM in driveway - E - Martin
1708 Roll 2 Photo 15 (b) (6) [redacted] suspect ACM in front yard & driveway - S - Martin
1709 Roll 2 Photo 16 (b) (6) [redacted] suspect ACM in front yard & driveway - E - Martin
Roll 2 Photo 17 (b) (6) [redacted] suspect ACM (cladding) in driveway - E - Martin

Amy M. Naguin

TDD# 06-9002-08 2-8-90

1725 Roll 2 Photo 18-20 Landfill on [redacted] in Marrero suspected of containing asbestos waste material from the Johns Manville plant - S - Martin / Naquin

1727 Roll 2 Photo 21 People walking over the landfill near La Palma - W - Johnson

1728 Roll 2 Photo 22 - ~~Dist~~ Business district at [redacted] across the street of landfill - N - Martin

1743 TATs Naquin & Terrell, DEQ John Sharp, DHH Charlie Johnson, & EPA OSC John Martin arrive back at the foot of the Huey P. Long bridge from windshield survey.

1750 TATs Naquin & Terrell, EPA OSC John Martin & DEQ Todd Thibodeaux depart New Orleans for Baton Rouge

1755 Late Entry: DHH Ken Lanier & DEQ Todd Thibodeaux also assist TAT of windshield inspection not stated at 1743 hours.

1910 arrived at EOC office in Baton Rouge, LA to return equipment

1945 TATs Terrell and Naquin depart for home

1950 Late Entry: Site safety meeting was held by TAT Ray Terrell before windshield inspection took place, however it was decided by TAT that TATs Naquin & Terrell will not egress the vehicle at any time during the inspection. Rainy weather conditions additionally influence TAT not to exit the vehicle.

Troy M. Naquin

TDD# 06-9002-08 2-9-90

0830 OSC John Martin presented TAT with the name of the person who reported the possible asbestos problem in the West Bank area of New Orleans [redacted] former employee of Johns Manville, now Superintendent of the City of Westwego, Wastewater Dept. reported [redacted] in driveway situation to DEQ. Ms [redacted] and phone is as follows: [redacted] Westwego, ~~LA~~ LA 70094 Office Ph.# (504) 347-2447.

0927 The following is a list of the residence sample [redacted]

Sample 1 [redacted]
Sample 2
Sample 3
Sample 4
Sample 5
Sample 6
Sample 7
Sample 8
Sample 9

in Marrero - front lot of Old Johns - Manville Plant

Sample 10 [redacted] near pavement

Preliminary lab report on 2-1-90 indicated that all 10 of the above samples surveyed were found to be positive for asbestos. Analysis indicate a two layered material with a soft bottom layer containing 40-50% of chrysotile and crocidolite and a hard cementitious top layer containing 5-10% of chrysotile and crocidolite. Chrysotile and crocidolite are two species of asbestos.

Troy M. Naquin

TDD# 06-9002-08 2-9-90

1120 OSC John Martin requested TAT Naquin to contact Debra Bendily of DEQ 295-8900 and get information for the following topics:
① 10 Bulk sample results taken 12 January 1990
② Copy of West Bank Asbestos report
③ Air sample data
④ Air & Bulk sample methodologies
- also to contact Ken Lanier of DHH about press release

1130 Site Entry - TAT Ray Terrell conducted on-site safety in route to New Orleans at 1430

1200 departed to bring OSC to B.R. airport

Troy M. Naquin

TDD# 06-9002-08 2-23-90

0900 TAT's Pierce, Naquin, & Ezell meet with Bob Hannah of Dept. of Environmental Quality Air Quality Division, Analysis Program Manager & Steve Scarbrough Air Quality Division. Topics of the meeting were discussed in the following order.

State of Louisiana's Plan to Sample:
- will sample (air) at 3 locations at which bulk samples have been taken
- Total of 6 samples per site - 3 taken at the breathing zone & 3 at the 2'-3' ground level
- 1 sample at each location will be analyzed by TEM & rest by PCM
- Pumps would be run at a rate of 8-10 l/m
- Source of power for pumps would be supplied by the residence or portable generators

TAT suggestions for sampling plan:
- follow ERT SOP guidelines for outdoor/ambient sampling for asbestos
- set up site like Table 2.1 from ERT SOP
- possibly aggressive sample in the future
- TAT will offer manpower

- John Sharp of DEQ Air Quality SE Division in New Orleans is working on setting up power from the homes & notifying the Jefferson Parish Authorities
- Equipment that the State has is 2 pumps
- State plans to set up one site one day to have a idea of how to operate the sampling mission, once this location has been done; the other 2 locations will be done simultaneously.
- State agreed to follow TAT suggestion of using the ERT SOP for conducting the air sampling

Troy M. Naquin

TDD# 06-9002-08 2-23-90

- TAT can offer support for pumps
- State & TAT cooperate in sampling plan and may sample in the future
- Weather conditions will dictate when the air sampling can occur
- State will not approve sample at this time
Laboratory Analysis:
- LDEQ cannot get lab until 6 weeks, therefore tasked TAT to contract lab
- State has many available
- Inactive & Abandoned Sites Division of DEQ is working on contracting lab support for long term.
- TAT will set up lab, if state follows the sampling plan drawn by TAT - the State agreed
- it was decided that Wednesday the 28th of February 1990 that TAT & DEQ would meet at 0730 and travel to New Orleans for recon of sampling locations & return to Baton Rouge to conduct a ~~trial~~ 2-23-90 trial run to debug any problems that might arise
- State tasked TAT to get the 25mm cassette with the .8um mixed cellulose ester as stated in the NIOSH 7400
- Thursday the ~~28th~~ 2-23-90 1st of March will be the first sampling day pending on weather
- Health & Safety - State doesn't have a special plan for H&S - TAT will follow EPE guideline therefore, TAT will enter sampling area in appropriate PPE when state can't
- only Steve Scarbrough of DEQ has been fit tested

Troy M. Naquin

TDD# 06-9002-08 2-23-90

- State expressed concern about background samples, it was suggested to sample in the area of New Orleans for background
- State & TAT will meet at 7:30 Wed the 28th to begin

1025 Meeting adjourned.

Troy M. Naquin

TDD# 06-9002-08 2-28-90

0700 TAT's Troy NAQUIN & Mark Egell arrive at E&E office with EPA Vehicle # 706. Mark Egell ~~will~~ TMN 2-28-90 has replaced Ray Yarrell as Site Safety Officer & Team Member as of 23, February, 1990. Yarrell has been assigned to another project. The scope of work today includes a site visit to New Orleans to recon sampling stations for the air sampling mission to be conducted. LDEQ officials Bob Hannah and Steve Scarborough will be assisting TAT's Naquin & Egell to New Orleans. After the recon in New Orleans, TAT & LDEQ will return to Baton Rouge to set up a rock run of a air sampling station, assisted by Dallas AT&T Chris Gunn, to delay any problems that may ~~so~~ TMN 2-28-90 arise during the actual air sampling mission.

~~0715~~ TMN

0725 TAT's Naquin & Egell depart E&E office for the LDEQ Capital Regional Office.

0728 TAT's Naquin & ~~Yarrell~~ TMN 2-28-90 Egell arrive at LDEQ. The weather today is partly cloudy, temp ~ 55°F, with a slight breeze from the east.

0745 TAT's Naquin & Egell and LDEQ - Air Quality Division Bob Hannah depart LDEQ Capital Regional Office in EPA Vehicle #706 for the West Bank area, Jefferson Parish, Louisiana. Troy A. Naquin

TDD# 06-9002-08 2-28-90

0830 TAT Naquin contacted John Sharp of LDEQ SE Region in New Orleans by Mobile phone to inform John that TAT and LDEQ personnel will be arriving in New Orleans in 40 minutes and to meet at the store at the foot of the Huey P. Long Bridge.

0910 TAT & LDEQ arrive in New Orleans and meet with John Sharp who gave TAT a list of the locations to be sampled.

Sample #5 (b) (6) [redacted]

Sample #6

Sample #7

Sample #8

0915 TAT & LDEQ personnel depart for site stop

0920 arrive at (b) (6) [redacted] in Westwego, LA

TAT Mark Egell conduct on-site safety meeting and in attendance are John Sharp, Bob Hannah, and Steve Scarborough of LDEQ and TAT makes Troy Naquin. Weather - Partly cloudy, temp 60°F, wind E-SE at ~5 mph

0925 Radiation Alert Monitor 4 calibrated last on 10/19/89 will be used for detection of any radiation hazards. The Miniram Aerosol Monitor Model PDM-3 EPA ID # 696464 serial # 4412 will be used to monitor asbestos dust / particles.

Troy A. Naquin

TDD#06-9002-08 2-28-90

0930 Camera used for photodocumentation is a Nikon AF N400s 35mm camera with Nikkor 50mm lense.

0935 Site Entry: Discussed at the on-site safety meeting held at 0920 was level of PPE was D; slip/trip/fall and especially animals/automobile hazards. The asbestos containing material will not be disturbed.

[redacted] came to get info from DEQ about his driveway.

Roll 3 Photo 1 driveway at [redacted]

0942 [redacted]

0950 Information from [redacted] was given to TAT about the ACM. The ACM was not used for roadbed material. Mr. [redacted] paid a truck driver in the 1950's to unload the material given freely from Johns-Manville and mixed cement filler into a truck load of material.

0958 No reading above background. 00 was detected by the Minimum for airborne particulate. No reading/hits was detected by the Monitor 4 for radiation.

1000 TAT & LDEQ personnel depart [redacted]

1001 Structures located near the [redacted] location are: A-Bear preschool & Westwego High School to the West & East respectively.

Troy N. Naquin

2-28-90

1002 Traffic down [redacted] was light to moderate

1005 arrive at [redacted]

Roll 3 Photo 4 [redacted] E-Naquin/Ezell

1007 depart [redacted]

1015 arrive at [redacted], the roofing on this home and surrounding homes contain corrugated, black, suspect-asbestos material.

Roll 3 Photo 5 - driveway at [redacted] W-Naquin/Ezell

- the material at this location has a rougher texture than the other locations with a smoother surface, this material appears to contain black flashing material

Photo 6 - black flashing material mixed in driveway material

1022 [redacted] was on site and inform TAT & DEQ that the material has been there since 1949 and his electrical outlets were available - [illegible]

1025 [redacted] residence [redacted] informed TAT & DEQ that the material when first laid down in 1962 had to wet down to keep material from flying in the [redacted]

1030 Photo 7 - driveway at [redacted] Ezell/Naquin

1032 TAT & DEQ depart Wilson St.

1036 TAT & DEQ arrive at [redacted]

Photo 8 - driveway at [redacted] Naquin/Ezell

1043 TAT & DEQ depart [redacted]

1055 TAT & DEQ arrive at [redacted] Marrero, LA

Photo 9 (TAN 2-28-90) driveway at [redacted] W-Naquin/Ezell

Photo 10 (TAN 2-28-90) person on driveway at [redacted] W-Naquin/Ezell

- This site is a potential air sampling location

1102 - TAT & DEQ depart Westwood Dr.

Troy N. Naquin

TDD# 06-9002-08 2-28-90

1112 TAT & DEQ gather for lunch

1142 lunch finish [(b) (6) redacted] next site

1145 arrived at [(b) (6) redacted] Roll 3 Photo 1 - driveway at [(b) (6) redacted] W - Naquin / Eyell

1147 Photo 2 - pulp - fibers found in back driveway at [(b) (6) redacted] Naquin / Eyell

1152 TAT & DEQ depart site

1155 TAT & DEQ arrive at [(b) (6) redacted] located between [redacted] behind the old Johns - Manville plant

1158 Roll 3 Photo 3 - ACM found near parking lot for the old Johns - Manville Plant - NW - Naquin / Eyell

Photo 4 - Rear of the Johns - Manville plant - N - Naquin / Eyell

Photo 5 - Persons working in the old Johns - Manville parking lot - N - Naquin / Eyell

1159 TAT & DEQ depart site

1203 TAT & DEQ arrive at [(b) (6) redacted]

Photo 6 - driveway at [redacted] - W - Naquin / Eyell

1206 Photo 7 - [redacted] (near) by the back shed at [(b) (6) redacted] - N - Naquin / Eyell

1210 Photo 8 - inside back shed at [(b) (6) redacted] - W - Eyell / Naquin

1212 Photo 9 - ACM found in back yard at [(b) (6) redacted] NW - Naquin / Eyell

1213 [(b) (6) redacted] who resides at [(b) (6) redacted] was on site and he informed TAT & DEQ

TDD# 06-9002-08 2-28-90

TAT & DEQ that the ACM was found in his back yard and he had to dig through the material in order to plant a small tree

1215 TAT & DEQ depart [(b) (6) redacted] for the old Johns - Manville plant

1218 arrive near River Rd on top of the levee by the old Johns - Manville Plant

1219 Roll 3 Photo 21 - Pan of the Johns - Manville dump site along the Mississippi River flooded with high water and has an open gate - N-NW

1222 Photo 22 - plaque found on fence at the Johns - Manville dump site on the Mississippi River - N - Naquin / Eyell

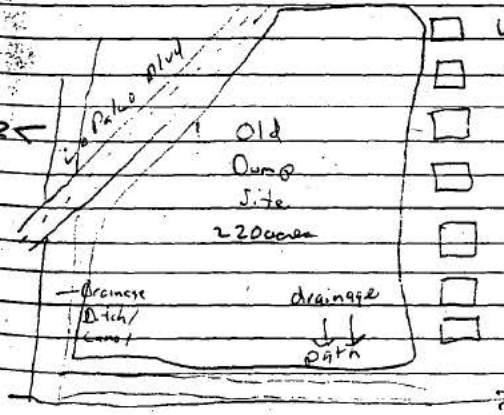
1232 TAT & DEQ depart River Rd heading for St Peter Blvd dump site

1250 TAT & DEQ arrive at St Peter dump site

1256 Roll 3 Photo 23 - St Peter Blvd Dump site - S - Naquin / Eyell

1258 Photo 24 - St Peter Blvd Dump site & drainage canal W - Naquin / Eyell Photo 25 Crocidlite Chip - NA - Naquin / Eyell

Site Sketch



Woodmere

Subdivision

Not to Scale

Naquin

TDD# 06-9002-08 2-28-90

1303 The site is moderately vegetated and contains abundant roofing, flashing, insulation, and transite board materials. Much of these thin material is evident on the surface as shown on Photo 23. According to John Sharp this site was used to dump material from the old Johns-Manville plant

TAT's Naquin & Ezell and DEQ Scarborough & Hannah depart site for Baton Rouge

1340 DEQ Bob Hannah has decided that the following three locations will be sampled:

① (b) (6) [redacted]

② [redacted]

③ 500 Avenue B - Marrero, LA

1500 TAT's Naquin and Ezell arrived at C&C office - Baton Rouge, LA

1635 Late Entry: Monitoring equipment including the Real Time Aerosol Monitor (Minimum) and the Radiation Alert Monitor 4 were used at all locations. No readings were detected by either of the instruments.

8 Summary of Activities for 2-28-90

- TAT's Troy Naquin and Mark Ezell meet with LDEQ personnel Bob Hannah and Steve Scarborough of the Air Quality Division in Baton Rouge for a recon mission to New Orleans
- TAT & LDEQ, including John Sharp in New Orleans conducted inspections in the West Bank Area of Jefferson Parish to decide which locations would be selected for air sampling
- TAT & LDEQ also conducted inspection of the two landfills containing asbestos material

Troy M. Naquin

TDD# 06-9002-08 2-28-90

possibly produced from the old Johns-Manville plant located in Marrero, LA

- Three locations were selected by LDEQ Bob Hannah with TAT approval. The following are the three locations selected:

① (b) (6) [redacted]

② [redacted]

③ [redacted]

- TAT would meet with LDEQ Steve Scarborough tomorrow at 0900 to ~~conduct~~ TMN 2-28-90 conduct a mock run of a sampling station

1645 Total hrs today (field)

Naquin - 7.5 hrs

Ezell - 7.5 hrs

1655 TAT Naquin, Pierce, Quinn, & Ezell ~~partcip~~ TMN participated in a conference call with OSC John Martin and Reagan Boyles in Dallas to debrief EPA on what was found on today's recon. EPA was briefed on the events listed at 1638 and EPA requested TAT to include in the sampling plan 5 bulk samples for EPA QA requirements. TAT agreed and the call was terminated.

Troy M. Naquin

0615 OSC John Martin contacted TAT Naquin at home about weather conditions. TAT Naquin informed the OSC that it was not raining at the present however, rain is expected tonight. OSC gave the go ahead to air sample today and he will be arriving in New Orleans at 1200 hrs.

0630 TAT Naquin arrived at warehouse to get EPA Vehicle #706 and the three generators.

06[redacted] TAT Naquin arrived at E&E office and met by TAT Ezell. TATs began loading EPA vehicle #706 with air sampling equipment & accessories which include: six Gilian pumps, 3 Honda generators, 1,5 gallon gas can, 1 thermometer, 1 measuring tape, 1 relative humidity pen, 1 wind speed indicator/compass, 2 rolls duct tape, 1 roll straping tape, 1 mobile phone, 1 Nikon camera, 1 Gilian Gilibrator, air sampling stands, and TAT PPE supplies.

0723 TATs Naquin & Ezell are meet by LDEQ personnel Steve Scarborough & Ken O'Hara — 3-7-90 and depart for the West Bank of New Orleans. Weather - cloudy, temp ~ 65°F, light northly breeze, relative humidity 90%.

0900 TATs Naquin & Ezell arrive at (b) (6) [redacted] with Scarborough & O'Hara. John Sharp & Alan Lamoine of DEQ SE Region are present.

0905 TAT Naquin & DEQ O'Hara & Sharp depart to get gasoline for the pumps.

0925 TAT returned to site. Weather - partly cloudy, temp 63°F, wind from S-SE with light gust.

0930 TAT Mark Ezell conducted on-site safety meeting. The following topics were discussed - conducting air sampling & photodocumentation, no radiation hazards or particulates were detected early on 2-28-90.

Troy M. Naquin

physical hazards - slip/trip/fall, automobile, dog/insect bite. Phone is available in TAT vehicle for emergencies. In attendance at the meeting were TAT Naquin and DEQ O'Hara and Lamoine.

0939 A Gilian Gilibrator Serial # 6059-H was used to calibrate the Gilian Aircon 520 AC. A sampling logsheet was generated by TAT to record the air sampling data. The Gilian pumps were numbered by TAT 1-6. Each pump was calibrated separately. TAT Ezell and Naquin conducted the calibration of the pumps. The pumps were calibrated to a follow:

~~Pump~~ 3-7-90 Pump #1	SN 2970	14.94 l/m
Pump # 2	SN 2965	15.01 l/m
Pump # 3	SN 3076	15.08 l/m
Pump # 4	SN ~~3080~~ 3081	14.90 l/m
Pump # 5	SN 3080	15.07 l/m
Pump # 6	SN 2969	not used

0955 Photodocumentation ~~will~~ 3-7-90 was conducted using a Nikon 35mm Camera SN 2530147 with a Nikon AF Nikkor 50mm lens.

0958 LDEQ John Sharp ~~conducted~~ 3-7-90 contacted the owner of the home (b) (6) [redacted] and informed (b) (6) [redacted] that DEQ & TAT will be conducting air sampling at his home today. Craig gave permission for the air sampling to be conducted.

1000 The ~~assumed~~ 3-7-90 air sampling cassettes used are made by Environmental Express Prebanded PCM Cassettes, 0.8MCEF Lot # EXT 49 Production Code 0022DJ. One cassette will be pulled for a laboratory blank.

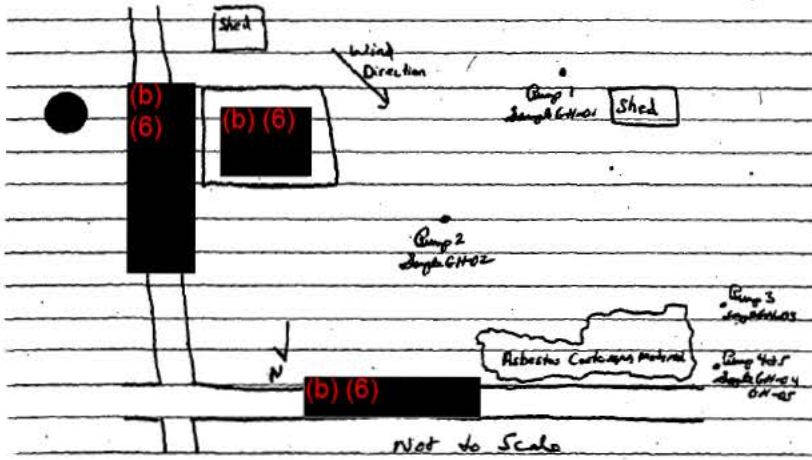
1010 The air sampling cassettes are labeled in sequence GH-01 through GH-05. GH-01 & GH-02 are the upwind samples and GH-~~04~~ 03 3-7-90 thru GH-05 are the downwind samples.

Troy M. Naquin

1015 TAT & DEQ installed air sampling cassettes at each pump location. Air sample cassette # GH-01 was installed at Pump #1 through GH-05 installed at Pump #5

1023 All pumps were turned on and site was closely monitored

1025 Site Sketch



1034 Late Entry: Roll 4 Photo 1 TAT Ezell calibrating the air pumps - ~~NE~~ NW - Naquin / Ezell

1035 Photo 2 Overall site setup - S - Naquin / Ezell
Photo 3 Background sample setup - S - Naquin / Ezell
Photo 4 Downwind sample setup - S - Naquin / Ezell

1036 Weather Conditions - Partly cloudy, temp 65-68°F, wind from SE with steady gust, Relative humidity 50%.

1102 The residence (b) (6) [redacted] contacted at work for (b) (6) [redacted] This information was given to TAT by John Sharp of DEQ

Troy M. Naquin

1115 TAT Naquin departs site for lunch, Ezell on site

1142 TAT Naquin returned from lunch

1145 All pumps are shut off due to resident (b) (6) [redacted] wanting to conduct woodworking near the sampling area.

1147 TAT Ezell departs site for lunch and Naquin refueled the 3 Honda Generators. The pumps will be turned off for 30 minutes to allow for better sampling period and by request of (b) (6) [redacted]

1210 All pumps were turned back on.

1221 TAT Ezell returned from lunch

1251 National Weather Service 465-9212
Conditions at New Orleans Airport at 12:00 temp 75°F, 54%, SE winds 18-29, Barometer 39.25 with 30% chance of rain. Information given to TAT by John Sharp

1300 Roll 4 Photo 5 & 6 Pan of Upwind / Background air sampling pumps - N-NE Naquin / Ezell

1305 Photo 7, 8 & 9 Pan of Downwind / ACM area N to NE Naquin / Ezell

1307 Photo 10 Asbestos contaminated area being sampled E - Naquin / Ezell
Photo 11 Respirable / Ground level downwind sampling location - E - Naquin / Ezell

1309 Photo 12 Area of friable ACM - NA - Naquin / Ezell
Photo 13 Gilian Pumps pulling 15 l/m - E - Naquin / Ezell

1311 Photos 14, 15, & 16 Pan of entire site - S-SE - Naquin / Ezell

1330 OSC John Martin arrived on site and TAT briefed him on the events of the day.

1345 TAT Ezell and OSC depart site to get stress drinks

1400 TAT Naquin checked all pumps which are working properly

Troy M. Naquin

TDD#06-9002-08 3-07-90

1415 OSC John Martin & TAT Mark Egell returned to site
1416 Steve Scarborough informed TAT to contact him and Ken at (b) (6) [redacted] tomorrow if air sampling is to be conducted.
1443 The laboratory blank being submitted was prepared 3-7-90 labeled GH-06 with a flow of 15 l/m and a start/end time of 1023/1448.
1445 TAT Egell began filling out the chain-of-custody form.
1448 All pumps were turned off after each cassette was sealed. Individual cassettes were stored upright in Ziploc bags separately.
1450 TAT & DEQ began tearing down site and TAT setting for post calibration of pumps.
1458 TAT began post calibration of the Gilian Air Pumps

Pump # 1	SN 2970	14.95 l/min
Pump # 2	SN 2965	14.58 l/min
Pump # 3	SN 3076	14.85 l/min
Pump # 4	SN 3081	14.74 l/min
Pump # 5	SN 3080	14.86 l/min

1515 TAT packed up equipment in EPA Vehicle 706 for departure to the Johns-Manville dump site
1516 Site Entry - OSC John Martin OK'ed the QASP by phone yesterday to March 1990.
1527 TAT & OSC depart in EPA rented car for a recon of the John-Manville dump sites.
1556 TAT & OSC arrive at the So Pelco dump site
1608 Roll 4 Photo 17 - White ACM! at So Pelco Blvd site - NA - Naquin / Egell
1612 Photo 18 - Black roofing material - NA - Naquin / Egell
Photo 19 - Piece of transite board - NA - Naquin / Egell
1616 Photo 20 - Roofing & transite material mixed - NA Naquin / Egell
1622 Photo 21 - Neighborhood behind site - W - Naquin / Egell

Ross M. Naquin

TDD#06-9002-08 3-7-90

1623 TAT & OSC depart the So Pelco Blvd dump site for location of a hotel
1800 TAT & OSC arrive at Holiday Inn on Veterans Blvd in New Orleans for overnite stay.

TAT Naquin - 11 hrs
TAT Egell - 11 hrs

Summary of Events on 3-7-90

① TATs Naquin & Egell meet with LDEQ Air Quality personnel Steve Scarborough - Ken O'Hara in Baton Rouge and departed to New Orleans
② TATs setting up sampling mission for ambient air at (b) (6) [redacted] at the residence owned by (b) (6) [redacted]
③ LDEQ personnel - Air Quality SE Division John Sharp & Alan Simoine in New Orleans
④ The air sampling mission criteria for the ambient air was at 15 l/m for 4 hours.
⑤ John Sharp informed TAT that he would find out who owns the So Pelco Blvd dump site
⑥ OSC John Martin arrived on site to oversee TAT operations
⑦ TAT & OSC conducted a quick recon of the So Pelco Blvd dump site

Ross M. Naquin

TDD #06-9002-08 3-08-90

Jorge M. Naguin

TDD #06-9002-08 3-08-90

Jorge M. Naguin

0800 TAT departed hotel for [redacted] residence of [redacted] The scope of work today involves air sampling of upwind/background and downwind areas for airborne asbestos fibers

0850 TAT Naquin & Ezell and OSC John Martin arrive at [redacted] TAT and OSC greet [redacted] explained the scope of work [redacted] gave his approval.

0910 TAT unpacked ~~vehicle~~ TMN 3-8-90 vehicle to begin calibration of the air pumps

0925 Alan Lamoine and Lewis Scheppegrell arrive on-site and they are representative of LDEQ

0935 TAT Ezell conducted on-site safety meeting which addressed physical hazards such as slip/trap/fall, automobiles, insect/dog bites and phone is available in TAT vehicle. No radiation or particulates were detected on earlier site visit on 2-28-90. In attendance at the meeting were OSC John Martin, TAT Naquin, and LDEQs Alan Lamoine & Lewis Scheppegrell.

0939 Weather conditions - Cloudy, Temperature 68°F, Winds S-SE at 5-15 mph with light gust, relative humidity ~60%.

0940 TATs Naquin & Ezell began calibration of the air sampling pumps. The air sampling pumps are by Gilian Type Aircon 520AC. The air pumps ~~will be~~ were TMN 3-8-90 calibrated using the Gilian Gilibrator Serial #6059-H. The pumps ~~are~~ are calibrated to ~15 l/min to conduct the air sampling. Each pump were calibrated seperately and numbered 1-6. However, only 5 pumps are needed.

Troy M. Naquin

0943 The pre-calibration of the Gilian Aircon 520AC air sampling pumps are as follows:

Pump #1	SN 2970	14.97 l/m
Pump #2	SN 2965	14.96 l/m
Pump #3	SN 3076	15.02 l/m
Pump #4	SN 3081	15.01 l/m
Pump #5	SN 3080	14.97 l/m

0959 Photodocumentation conducted using a Nikon N4004s 35mm camera with a Nikkor AF 50 mm lens with a serial # Z530147.

1000 TAT & OSC & LDEQ recon site for site setup for air sampling.

1010 The air sampling cassettes are made by Environmental Express - Prebanded PCM ~~cassettes~~ TMN 3-8-90 cassettes 0.8MCEF Lot # EXT49. The air cassettes were labeled WM-07 through WM-11.

1020 Cassettes were installed at each pump in order Cassettes WM-07 at Pump #1 through WM-11 at Pump #5 and pumps were turned on.

1022 A very, very light drizzle was detected by TAT however not enough to scrub the mission.

1023 Late Entry: LDEQ Steve Scarborough and Ken O'Hara arrived on-site at 0945.

1024 The site air sampling arrangement involved the pulling of two upwind sampling or background samples and 3 downwind samples, two at respirable height and one at the 2-3 ft ground level. TAT will not disturb the asbestos containing material.

Troy M. Naquin

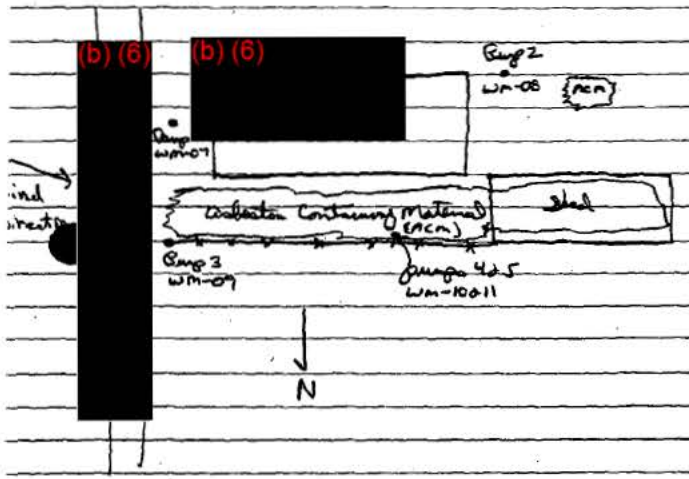
TOD#06-9002-08 3-08-90

Jorge M. Naquin

TOD#06-9002-08 3-08-90

Jorge M. Naquin

1028 Site Sketch



1033 Roll 4 Photo 22 - Front of (b) (6)
Pumps 1 & 3 - S - Naguin / Egell
035 Photo 23 - Driveway at (b) (6)
Pumps 4 & 5 - NW - Naguin / Egell
Photo 24 - Backyard of (b) (6)
Pump 2 - S - Naguin / Egell
100 Roll 5 film installed in the camera
Photos 1-3, 4 Voids
1125 TAT Egell and DEQ O'Hara departed site to purchase gasoline for the generators and lunch
205 TAT Egell & DEQ O'Hara returned to site for lunch
215 TAT Naguin, OSC Martin, & DEQ Scarborough off-site for lunch
245 TAT Naguin, OSC Martin, & DEQ Scarborough returned to site from lunch

Ann M. Naguin

1246 Site Entry: Pumps were turned off to refuel the generators at 1245 hrs.
1248 All generators were refueled and all pumps restarted. OSC Martin informed TAT Naguin that the site identification is YS. He also requested a POLREP once TAT was given the CERCLIS #.
1256 Weather conditions - cloudy, temp 74°F, wind S East 16 mph relative humidity 74%, B.P. 30.29. Information for weather conditions given by the National Weather Service at the New Orleans Airport 465-9212
1303 (b) (6) arrived at (b) (6) & started a lawnmower in his driveway by pumps 4 & 5 only for a short time.
1323 (b) (6) started mower for about 10 seconds
1349 (b) (6) restarted mower for 5 seconds, again
1405 (b) (6) restarted mower for 5 seconds, again.
1410 Roll 5 Photo 5 - Driveway at (b) (6) showing two automobiles - W - Naguin / Egell
Photo 6 - (b) (6) working on lawnmower by Pumps 4 & 5 - W - Naguin / Egell
1417 All pumps were shut down due to light drizzle beginning to increase in intensity. All cassettes were collected and stored individually in ziplock bags with sampling data written on the cassettes.
1425 TAT, OSC, & DEQ collected all sampling equipment and TAT began post-calibration of the air pumps using the Gilian Calibrator SN 6059-H
1426 The two automobiles located in the driveway at (b) (6) were not moved at any time during sampling to disturb the material, however (b) (6) at different intervals started a lawnmower which may have disturbed the material. Refer to 1303 hrs.

Ann M. Naguin

1435 Post-calibration of Pumps 1-5 used for air sampling at 516 Meyers are as follows:

Pump #1	SN 2970	14.73 l/m
Pump #2	SN 2965	14.71 l/m
Pump #3	SN 3076	14.75 l/m
Pump #4	SN 3081	14.72 l/m
Pump #5	SN 3080	14.59 l/m

all information pertaining to todays air sampling can be found on the Sampling Log Sheet

144[illegible] Late Entry: LDEQ personnel Alan Lamoine & Lewis Scheppegrell departed site at 1000 hrs this morning

1443 OSC John Martin requested TAT to drive by and photodocument the dumpsite on the John-Manville plant

1445 OSC John Martin & LDEQ personnel Steve Scarborough and Ken O'Hara depart site. TAT Naquin & Ezell depart for the John-Manville plant

1456 TAT Naquin & Ezell arrive at the John-Manville plant. A pipe yard is presently in operations at the dump site given by OSC John Martin. Asbestos containing roofing material was found outcropping near the ditch between River Road and the pipe yard.

1502 Roll 5 Photo 7-11 Panorama of the roofing material outcropping by the pipe yard - S-SE-Naquin/Ezell
Photo 12 Black, layered roofing material outcropping by the ditch - S - Naquin/Ezell

1503 Photo 13 Pipeyard near John-Manville SW - Naquin/Ezell

1506 TAT Naquin & Ezell depart the John-Manville plant for recon of other areas near with ACM.

Tony M. Naquin

1514 Possible ACM was found at [redacted] south of the West Bank Expressway

1526 TAT arrived on [redacted] and found residential ~~located~~ [redacted] have possible ACM. Locations at [redacted] on [redacted] had ACM in Harvey LA

1528 Roll 5 Photo 14 - ACM material at ~~752~~ 756 Estalate Ave
S - Ezell/Naquin
Photo 15 - ACM material at [redacted]
W - Ezell/Naquin

1532 Roll 5 Photo 16 - ACM at [redacted] in back
E - Ezell/Naquin
Photo 17 - ACM in driveway at [redacted]
- W - ME/TN
Photo 18 - ACM closeup of driveway at [redacted]
[redacted] - ME/TN

1545 Possible ACM found at [redacted]
on [redacted]

1550 ACM found at [redacted] in driveway

1555 ACM found at [redacted] driveway and 535

1557 Thick ACM found at [redacted]
Roll 5 Photo 19 - driveway at [redacted]
Photo 20 - closeup of driveway at 2[redacted]

1610 TAT Naquin & Ezell depart Harvey/Gretna area for hotel

1705 TATs arrive at hotel - Hyatt Regency in New Orleans.

Summary of Events on 3-08-90

① TAT Naquin & Ezell & OSC Martin arrived at [redacted] in Marrero, LA to conduct asbestos air sampling
② Air sampling was conducted with a flow rate of ~15 l/m
③ OSC John Martin requested POLREP and he departed today for Dallas
④ TAT successfully conducted air sampling as demanded - Naquin & Ezell - 8 hrs.

Tony M. Naquin

TDD#06-9002-08 03-09-90

0750 TAT: Raquin & Egell checked out of hotel and departed for (b) (6) [redacted] in Manaus, LA to conduct air sampling.

0830 TAT: arrive at (b) (6) [redacted] and unloaded sampling equipment. Weather - partly cloudy, temp ~ 68-70°F, light breeze from the SE. The scope of work today includes air sampling for airborne asbestos fibers from asbestos containing aggregate generated from Johns-Manville. A total of 5 air samples will be taken, 2 upwind/background and 3 downwind with 2 being at the respirable level and one at ground level. The flow rate for sampling will be 15l/m for 4 hours.

0855 TAT Mark Egell - Site Safety Officer conducted the on-site safety meeting. The attendance at the meeting was only TAT Raquin. Addressed was physical hazards of slip/trip/fall, automobile, animals/insect bites and chemical hazards of species of asbestos chrysotile & crocidolite. No radiation or particulate hazards were detected at our earlier site visit on 2-28-90.

0900 LDEQ - Air Quality personnel Steve Scarborough arrived on site.

0905 Photodocumentation today will utilize the Ricoh N 4004s 35mm camera with a Ricoh AF 50mm lens serial number 2530147.

0910 The air sampling cassettes are labeled TL-12 through TL-16 for the air sampling mission. Receipt (b) (6) [redacted] currently resides at (b) (6) [redacted] Weather at N.O. airport temp 73°F, R.H. 83%, SE at 7 mph with partly cloudy skies.

Amy M. Raquin

TDD#06-9002-08 03-09-90

0920 TAT: Raquin & Egell began calibration of the air pumps type Gilian Aircon 520AC. The air pumps were calibrated using the Gilian Calibrator SN 6059-H. All pumps are calibrated to an approximate flow rate of 15l/m. Each pump was calibrated separately and labeled 1-5. The pre calibrated flow rates of the Gilian Aircon 520 AC air sampling pumps are as follows:

Pump #1	SN 2970
Pump #2	SN 2965
Pump #3	SN 3076
Pump #4	SN 3081
Pump #5	SN 3080

0945 The air sampling cassettes are made by Environmental Express Prebaited PCM cassettes, 0.8MCEF Set # EXT 49.

1000 All Honda generators were started and all Gilian Aircon 520AC were started.

1020 LDEQ Alan Lamoine arrived on site.

1025 Roll 5 Photos 21-24 Panorama of site at (b) (6) [redacted] (b) (6) [redacted] Manaus, LA. - E. Raquin/Egell.

1050 LDEQ Alan Lamoine departed site.

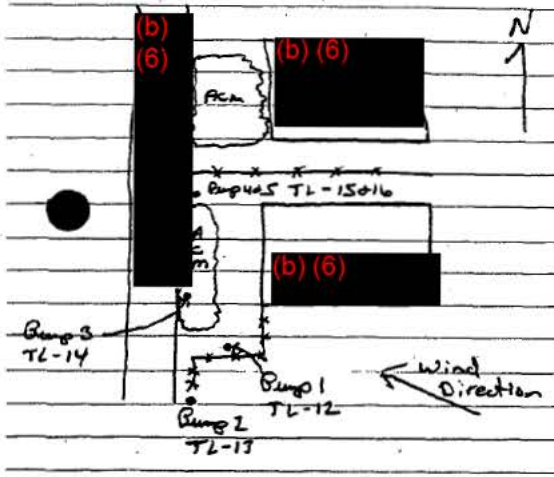
1055 A very light drizzle started to come down but dissipated quickly.

1059 (b) (6) [redacted] air sampling site is located very close to the street. Nearby homes, especially adjacent to the north contained the Johns-Manville material. Essen St had light to low medium traffic volume during TAT observation. See site sketch on next page for details.

Amy M. Raquin

TDD#06-9002-08 03-09-90

1103 Site Sketch



1120 all pumps were shut off due to a very light drizzle

1127 all pumps were checked & cassettes and the pumps were restarted.

1139 ADL laboratory lot CH-06 was given a random volume of 3600.5l for QA/QC and will be submitted with the air ~~sampling~~ samples taken 3-9-90.

1147 Roll 6 Photo 1 Pump 1 background at (b) (6) E - Naquin / Egell

Photo 2 Pump 2 background - SE - Naquin / Egell

1149 Photo 3 Pump 3 downwind - E - Naquin / Egell

Photo 4 Pump 4&5 downwind - SSE - Naquin / Egell

1229 Heavy rain began to fall as TAT decided to abandon the site.

1230 all pumps were shut off and all air sampling cassettes are invalid

Jon M. Naquin

TDD#06-9002-08 03-09-90

1236 TAT: Naquin & Egell and LOEA Scarborough departed site for Baton Rouge. Air sampling for (b) (6) (b) (6) was postponed till better weather conditions permit. Air sampling cassettes were placed in the original box in an upright position with a EPA custody seal placed on the box.

1405 TAT's arrived at E&E office in Baton Rouge and reported in.

1425 TAT Naquin attempted to contact John Martin, he was not available, will return call.

1445 TAT: Naquin & Egell departed to E&E warehouse to unload sampling equipment & decon.

1550 OSC John Martin contacted TAT Naquin by mobile phone at warehouse and requested TAT to bring samples collected then for for analysis.

1600 TAT's return to E&E office. Total field hrs today Naquin & Egell 7 hrs.

Summary of Events on 3-09-90

① TAT setup air sampling for airborne asbestos fibers at (b) (6) in Marrero, LA.

② TAT demobed at 12:30 due to raining weather conditions

③ all air sampling cassettes taken at (b) (6) were invalid due to not enough sampling time required to satisfy EPA ERT SOP.

④ TAT sealed all cassettes with custody seal

⑤ TAT returned to Baton Rouge and unloaded air sampling equipment.

⑥ TAT will submit samples Monday for analysis per OSC request.

Jon M. Naquin

TDD#06-9002-08 09-26-90

0915 TAT Naquin departed Baton Rouge to pick up OSC: John Martin and Mike William
1035 arrived New Orleans airport
045 Picked up John Martin and Mike Williams - departed for Westbank site
112.5 arrived at Johns-Manville plant on River Road in Marrero
1134 Representatives from Jubilee Threading Inc stopped by to ask what we were doing. John Martin told the men that we were just looking at the site by the request
200 TAT and OSC departed site area for lunch
300 TAT and OSC continued to drive around the Westbank area looking at the extent of contamination of the ACM
1630 TAT Naquin departed New Orleans for Baton Rouge
1830 TAT Naquin arrived in Baton Rouge. OSCs Martin and Williams stayed overnight in New Orleans.

Angie M. Naquin

TDD#06-9002-08 09-25-90

PHOTOGRAPH LOG

CAMERA/LENS (MODEL)
SERIAL #

TIME	SQ/FRT	ROLL#	FTL	SUBJECT	P/N

Angie M. Naquin

TDD#06-9002-08 09-26-90

1415 Meeting with LDEQ representative about the state's view of Westbank asbestos site
1424 TAT recommended doing survey of area before doing actual sampling
1435 OSC John Martin requested LDEQ Todd Thibodeaux to find a source for EPA to get hold of the blueprints of the neighborhoods for tracking of the ACM areas
1455 OSC requested data that the Dept. of Health and Hospitals for research of possible past cases of asbestosis of areas around the Johns-Manville site. TAT will be conducting survey of the area possibly in late October to Early November.
1510 Meeting adjourned. Present at meeting were John Martin and Mike Williams - OSC, Region 6, Todd Thibodeaux of LDEQ Inactive and Abandoned Sites, and TAT's Amy Naquin and Ann Jarboe

Amy M. Naquin

TDD#T06-9010-54 10-22-90

A new TDD (TDD# T06-9010-54) has been issued under the new contract (# 68-W0-0037) which replaces the old TDD (TDD# T06-9002-08) under the old contract (# 68-01-7368).

Amy M. Naquin

ATTACHMENT H
Polrep #1

T06-9010-54C

I. HEADING

Date: 3/14/90
From: OSC John Martin
To: Director, ERD, and Region 6
Subject: West Bank Asbestos, Marrero, Jefferson Parish, LA
POLREP: 1

II. BACKGROUND

Site No. Y5
Response Authority: CERCLA
NPL Status: non-NPL

III. INCIDENT INFORMATION

A. Situation

The Johns-Manville Plant in Marrero, Louisiana produced various asbestos containing building materials on the West Bank of the Mississippi River. A by-product of the manufacturing process was an asbestos containing material (ACM) in aggregate form. ACM was utilized by the local residents for driveway construction in nearby neighborhoods; the ACM was reportedly free to the public. In 1989, the aggregate was bulk sampled by the Louisiana Department of Environmental Quality (LDEQ) and was found to contain 40 to 50% asbestos. TAT and LDEQ conducted initial reconnaissance of the area around the inactive Johns-Manville Plant. ACM was found to be present in the cities of Marrero, Westwego and Harvey, in Jefferson Parish, LA. The extent and distribution of the ACM are undetermined.

B. Actions Taken

On 7-9 March 1990, TAT, OSC John Martin and representatives of LDEQ conducted sampling for airborne asbestos fibers at three preselected areas. TAT followed the EPA Emergency Response Team (ERT) Standard Operating Procedures for outdoor ambient air sampling for asbestos. Sampling was completed at two of the three locations; however, sampling at the third location was suspended due to inclement weather conditions. Samples were submitted for laboratory analysis and TAT is currently awaiting results.

C. Future Plans

TAT plans to repeat air sampling at the third location, and await analytical results to determine futher investigation.

TAT Representative Troy M. Naquin
Status of Case: Case Pending

000225.108

ATTACHMENT I
Project Meeting Attendence Sheet

T06-9010-54C

2/8/90

Attendees	Agency	tel. #
RAY E. FERRELL	ECOLOGY & ENVIRONMENT, INC.	(b) (6) [redacted]
Jerry M. Maguire	Ecology & Environment, INC.	
Chris Roberie	DEQ / Air / Enforcement	
Todd Thibodeax	DEQ / IAS	
Ken Lanier	DHH - OPH	
Terry Ryder	DEQ Legal & Enforcement	
Mike McDaniel	DEQ Air Quality & Nuclear Energy	
GUS VON BODUNGEN	DEQ AIR QUALITY	
Steve Price	Ecology & Environment, Inc. (Technical Assistance	
JOHN MARTIN	EPA - OSC	

ATTACHMENT J
Sampling QA/QC Plan
(60 Pages)

T06-9010-54C

SAMPLING QA/QC PLAN

Westbank Asbestos Site

Jefferson Parish, Louisiana

Draft

Prepared by
Ecology and Environment, Inc.
Technical Assistance Team - Region 6

EPA Project No.: FY90-1364
Contractor Work Order.: T06-9002-~~2708~~
EPA Contract No.: 68-01-7368

RECEIVED
JUN 29 1990
E & E Baton Rouge

APPROVALS

Ecology and Environment, Inc.

Troy Naquin — 3-8-90 Date
Project Manager

R. Steve Pierce — Date
ATATL

EPA

John Martin — 3-8-90 Date
On-Scene Coordinator

000225.112

1.0 BACKGROUND

The Westbank Asbestos Site is located on the west bank of the Mississippi River in Jefferson Parish, Louisiana (Figure 1). The suspected areas of contamination include the cities of Westwego, Marrero, Harvey, and Gretna. During the 1950's and 1960's, a Johns-Mansville Plant was in operation near Marrero, LA. The plant produced various asbestos containing products. An aggregate by-product left over from the plant operations was dumped on plant property. Local residents found that this material was an excellent material for constructing driveways. The Johns-Manville Plant distributed the asbestos containing material free to the public. In some cases, concrete was added to the aggregate to provide additional structural support.

On 12 January 1990, The Louisiana Department of Environmental Quality (LDEQ) performed sampling of the Westbank area. Ten bulk samples were collected of suspected asbestos containing material in Marrero and Westwego. The samples were analyzed using stereomicroscopy and polarized light microscopy. Results indicated estimated ranges of 25-60 % total asbestos, 8-35 % Chrysotile, and 10-35 % Crocidolite.

2.0 OBJECTIVES

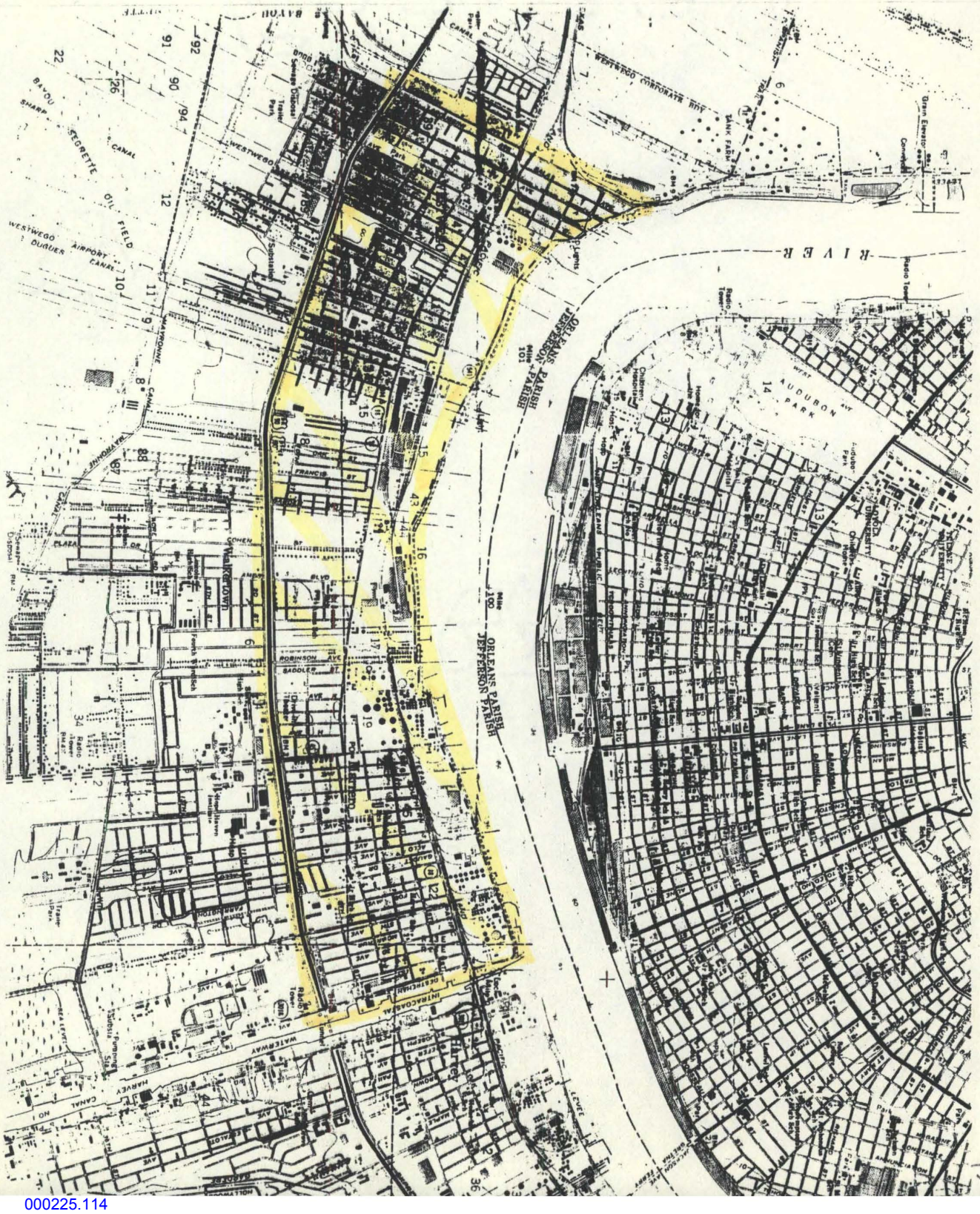
The objective of this project is to perform air ~~and bulk sampling~~ to determine the magnitude and extent of airborne asbestos contamination at the site. High flow air samplers will be utilized for sample collection, followed by laboratory analysis to establish levels of contamination.

Site samples will be taken and analyzed for the purpose of:

- Site characterization
- Risk assessment
- Removal potential

The data will be evaluated against current federal NAAQS standards and OSHA permissible exposure limits.

Figure 1: SUSPECTED AREAS OF CONTAMINATION



J-3

3.0 QUALITY ASSURANCE OBJECTIVES

As stated above, air sampling is the anticipated action to be performed during this project. Quality Assurance objectives for given parameters are as follows:

PARAMETERS	MATRIX	INTENDED USE OF DATA	QA OBJECTIVE
Mini-Ram			
Particulates	air	field screening	QA1
High-flow Air Samplers			
Asbestos	air	characterization	QA2
Particulates	air	characterization	QA2

Methods to be employed during this event include:

NIOSH method 7400 Phase Contrast Microscopy
EPA method Transmission Electron Microscopy

For QA2 (EPA method), results will be asbestos specific; preliminary screening (method 7400) will include qualitative fiber counts of all airborne particulates. Results will be representative, comparable and complete. Quality Assurance requirements for objective QA2 are specified in section 6.0.

4.0 APPROACH AND SAMPLING METHODOLOGIES

4.1 Media/Matrix

This event involves the assessment of the following media:

Air (Breathing zone)

4.2 Sampling Equipment

The following equipment will be utilized to obtain samples from the respective media/matrix:

Media	Sampling Equipment	Specifications	Dedicated
air	High-flow air samplers	at least 10 l/min	no
air	mixed cellulose filter (PCM and TEM)	25 mm with a .8 micron pore size	yes
air	extension cowl	50 mm	yes
air	Real-Time Aerosol Monitor (mini-RAM)	RAM-1	no

J-4

4.2.1 Sampling Equipment Decontamination

Decontamination of the pumps will be accomplished using the following sequence:

deionized/distilled water wipe/rinse
air dry

4.3 Sampling Design

8 bulk samples will be taken at ~~8 of the 10 locations~~ no previously sampled by LDEQ. Sample locations will be shown on a map and table to be attached later.

The high flow air samplers will be placed in the following locations:

(b) (6) [redacted]

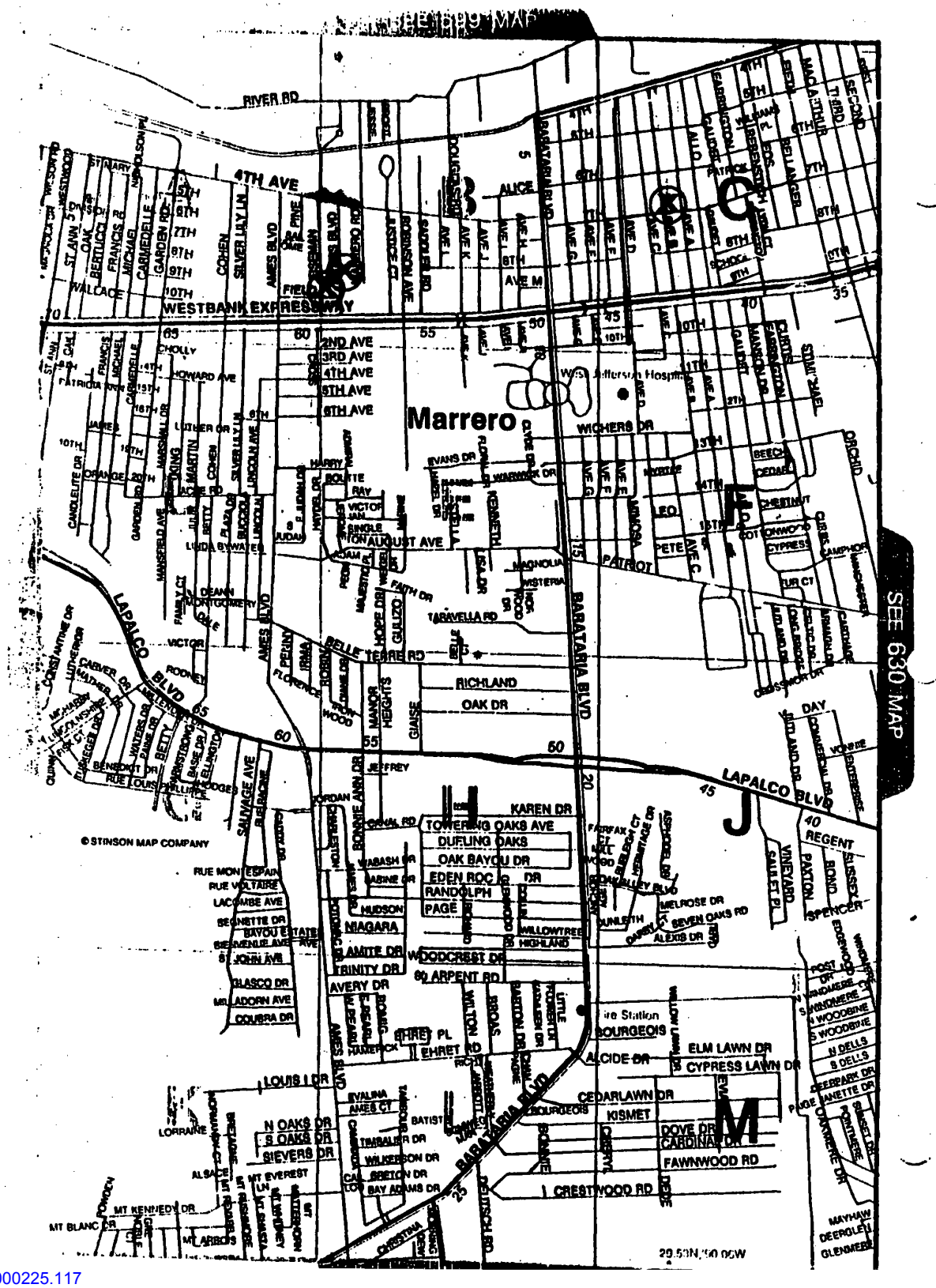
(The locations are depicted on Figure 2.)

Sampling design and methodology will meet EPA ERT SOP criteria.

5-6 high flow air sampling pumps will set up at each location. The pumps will be run for approximately 4 hours, at 15 liters/minute, for a total volume collected of 3600 liters of air. These locations will enable an upwind or downwind sample to be obtained regardless of wind direction, and to evaluate the potential maximum airborne exposure to local residents. If all the siting criteria cannot be met, the reasons for not meeting the criteria will be documented in the logbook.

Periodic monitoring of total particulates will be conducted during this activity using a mini-RAM. Meteorological data, including ambient temperature, barometric pressure, relative humidity, wind speed and direction will be acquired from the National Weather Service at the New Orleans International Airport and the information recorded for operations during the entire sampling period.

Figure 2: Air Sampling Locations



J-6

4.4 Standard Operating Procedures

4.4.1 Sample Documentation

All sample documents must be completed legibly in ink. Any corrections or revisions must be made by lining through the incorrect entry and by initialing the error.

1. Field Logbook

The Field Logbook is essentially a descriptive notebook detailing site activities and observations so that an accurate account of field procedures can be reconstructed in the writer's absence. All entries should be dated and signed by the individuals making the entries, and should include (at a minimum) the following:

1. Site Name and project number.
2. Proposed work and objectives of mission.
3. Name(s) of on-site personnel and responsibilities.
4. Additional subcontractor information and names of on-site personnel.
5. Dates and times of all entries (military time preferred).
6. Descriptions of all site activities, including entry and exit times.
7. Noteworthy events and discussions.
8. Weather conditions.
9. Site observations.
10. Identification and description of samples, matrices and locations.
11. Date and time of samples collections, along with chain-of-custody and shipping information.
12. Record of Photographs.
13. Site sketches.
14. Site safety information, including site safety meetings and levels of protection.
15. Equipment inventory and calibrations.
16. Record of important telephone conversations

2. Sample Tags

Sample tags must clearly identify the particular sample, and should include the following:

1. Site name and number
2. Date and time sample was taken
3. Sample preservation
4. Initial of sampler(s)
5. Analysis requested
6. Sample location

Sample tags must be securely affixed with string to the sample container.

3. Chain-of-Custody Record

A Chain-of-Custody record must be maintained from the time the sample is taken until its final disposition. Every transfer of custody must be noted and signed for and a copy of this record kept by each individual who has signed. When samples (or groups of samples) are not under direct control of the individual responsible for them, they must be stored in a locked container sealed with a Chain-of-Custody seal.

The Chain-of-Custody record should include (at minimum) the following:

1. Sample identification number
2. Sample information
3. Sample location
4. Sample date
5. Name(s) and signature(s) of sampler(s)
6. Signature(s) of any individual(s) with control over samples
7. Airbill and shipping paper numbers

4. Chain-of-Custody Seals

Chain-of-Custody Seals demonstrate that a sample container has not been tampered with or opened.

The individual in possession of the sample(s) must sign and date the seal, affixing it in such a manner that the container cannot be opened without breaking the seal. The name of this individual, along with a description of the sample packaging, must be noted in the Field Logbook.

5. Corrective Action

Corrective actions are those taken in response to nonconformance reports, audit findings, or surveillance findings. The quality assurance representative is responsible for reviewing audit reports and nonconformance reports to determine the significant or repetitious conditions adverse to quality, or failure to implement or adhere to required quality assurance practices. When such problems are defined, the responsible manager must investigate the causes of the problems and define and implement the necessary actions to correct the problems. Documentation that supports major corrective actions must be maintained in the project files.

000225.119

4.4.2 Sampling

Asbestos Sampling

(See Attachment 2 -EPA ERT Asbestos Sampling SOP)

4.4.3 Sample Handling and Shipment

At the conclusion of the sample period, the cowl unit including the filter will be removed, and placed in a wide mouth jar for sample shipment. Each of the jars' caps will be secured with custody seals. Bottle lables will contain all required information, including sample number, time and date of collection, and analysis requested. All jars will be placed in plastic coolers, and padded with bubble wrap.

All sample documents will be affixed to the underside of each cooler lid. The lid will be sealed and affixed on at least two sides with EPA custody seals so that any sign of tampering is easily visible.

4.4.4 Analysis

Asbestos Analysis

The laboratory will follow the NIOSH Method 7400 and EPA method. EPA ERT SOP #2015 Asbestos Sampling will be referenced (Appendix B). The use of field logbooks, by TAT, for site documentation will be consistent with E & E SOP-Field Activity Logbooks, GENTECH 4.1

4.5 Proposed Scedule of Activities

(See Table 1)

Table 1: Proposed Schedule of Activities

Activity	Time Period
1. Preparation	2/6 - 2/7/90
2. Site Recon	2/8/90 & 2/28/90
3. Laboratory Procurement	2/26 - 3/2/90
4. Sampling Air & Bulk	3/7 - 9/90
5. Laboratory Analysis	3/12 - 3/16/90
6. Data Review	3/19/90
7. Final Report	7/15/90
8.	
9.	

J-10

5.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

The EPA On-Scene Coordinator, John Martin, is responsible for the coordination of resources to develop and implement the Sampling QA/QC Plan and will provide direction to Ecology and Environment, Inc. TAT concerning project objectives, sampling needs, and schedule.

The Ecology and Environment, Inc. Project Manager, Troy Naquin, is the primary point of contact for the EPA On-Scene Coordinator. The project manager is responsible for the development and completion of the Sampling QA/QC Plan, project team organization, and supervision of all project tasks, including reporting and deliverables. In addition, he is responsible for ensuring field adherence to the Sampling QA/QC Plan and recording any deviations.

The following field sampling personnel will work on this project:

Personnel	Responsibility
Troy Naquin	Project Manager
Mark Ezell	SSO, Sampler

The Ecology and Environment, Inc. TAT Project Director, R. Steve Pierce, is responsible for providing administrative and technical guidance to the Project Manager and team, auditing field activities, reviewing the technical deliverables, and proposing corrective actions, as necessary.

The Ecology and Environment, Inc. Quality Assurance Officer (QAO), Sherri Hughes, and Regional Safety Officer (RSO) Maxine LaPierre, are responsible for auditing and guiding the project team, reviewing plans, and proposing corrective actions, if necessary, for nonconformity to the Sampling QA/QC plan or Site Safety Plan.

The following laboratory will be providing the following analyses:

Lab Name/Location	Lab Type	Parameters	Method
West-Paine Laboratories 7979 G.S.R.I. Ave Baton Rouge, LA 70820	Commercial	Asbestos	NIOSH 7400 and EPA (TEM)

6.0 QUALITY ASSURANCE REQUIREMENTS

The following requirements apply to the respective QA Objectives and parameters identified in Section 3.0.

The following QA protocols apply:

For **QA1** data

- Instrumentation calibration and/or performance check of the given test methods will be documented on data sheets or in the field logbook.
- Sample documentation will be provided utilizing sample data sheets and the field logbook.

For **QA2** data

- Adherence to proper sample documentation and chain-of-custody procedures.
- Documentation of calibration of air samplers.
- Determination of detection limit by the selected laboratory.

Note: QC procedures prescribed in the Asbestos Sampling SOP and NIOSH Analytical Methods must be followed by TAT and laboratory selected for analysis of the air samples.

7.0 DELIVERABLES

All project deliverables will receive an internal peer QC review prior to release, as per guidelines established in the (EPA Regional/Branch or Contractor) Quality Assurance Program Plan.

The Ecology and Environment, Inc., Project Manager, Troy Naquin, will maintain contact with the EPA On-Scene Coordinator, John Martin, to keep him informed about the technical and financial progress of this project. This communication will commence with the issuance of the work assignment. Activities under this project will be reported in a final report, described herein. Activities will also be summarized in appropriate format, highlighting the numbers and types of samples taken, for their inclusion in monthly and annual reports.

Draft Final Report

A (draft) final report will be prepared, by the TAT to correlate available background information with data generated under this sampling event. Appropriate maps, figures, and attachments will supplement the written report.

Analytical Data Package (QA2)

The sampling event requires analytical services. Documentation of laboratory selection, raw data, and results will be provided in the report. A review of the data generated under this plan will be undertaken. The assessment of the data acceptability or usability will be provided as part of the analytical portion of the report.

8.0 DATA VALIDATION

Asbestos air sampling cannot be validated by the OSWER Directive 9360.4-01. The NIOSH Method 7400 and EPA Method contain their own Quality Control measures.

ATTACHMENT 1

LDEQ Analytical Results

(4 pages)

La. Dept. of Environmental Quality
Office of Management & Finance
Technical Services Div.

February 14, 1990

TO: Dale Givens
Jim Hazlett
Mike McDaniel
Gus Von Bodungen
Chris Roberie
Earl Clayson
John Sharp
Bob Wasconick
Harold Ethridge
Todd Thibodeaux
Troy Naquin

FROM: Debra E. Bendily

SUBJECT: Results Report for Completed Sample Analysis

Samples received were analyzed using stereomicroscopy, poliarized light microscopy with dispersion staining as well as crossed, slightly crossed polars, and first order red plate to 200X. Standard procedures and knowns from McCrone Lab, DEQ Reference Slides and McCrone Particle Slides and Atlas were used for identification.

Individual bulk sample analysis of pulpy material under more cementitious top material were as follows:

Sample #1 (90-01-016) (b) (6) [redacted]

Prep #	Total Asb. %	Chrysotile %	Crocidolite %	Remainder % * *(Non-fibrous + non-asbestos fibers)
A	~50	~35	~15	~50
B	~50	~35	~15	~50
C	~55	~22	~33	~45
D	~ 25	~15	~10	~75

11720 Airline Hwy. Baton Rouge, LA 70817 (504) 295-8900

J-15

Sample #2 (90-01-013) - (b) (6) [redacted]

Prep #	Total Asb. %	Chrysotile %	Crocidolite %	Remainder % *
A	~60	~35	~25	~40
B	~55	~20	~35	~45
C	~50-55	~30	~20-25	~45-50
D	~45	~20	~25	~55

Sample #3 (90-01-012) - (b) (6) [redacted]

Prep #	Total Asb. %	Chrysotile %	Crocidolite %	Remainder % *
A	~26	~8	~20	~72
B	~35	~10	~25	~65

Sample #4 (90-01-019) - (b) (6) [redacted]

Prep #	Total Asb. %	Chrysotile %	Crocidolite %	Remainder % *
A	~50	~20	~30	~50
B	~45	~20	~25	~55
C	~35	~15	~20	~65
D	~40	~15	~25	~60

Sample #5 (90-01-08) - (b) (6) [redacted]

Prep #	Total Asb. %	Chrysotile %	Crocidolite %	Remainder % *
A	~42*	~20	~20	~58
	*traces of rigid asbestiform, morphology like amosite, but dispersion colors off.			
B	~50	~25	~25	~50
C	~45	~18	~27	~55
D	~50	~27-1/2	~22-1/2	~50%

Sample #6 (90-01-017) - (b) (6) [redacted]

Prep #	Total Asb.%	Chrysotile %	Crocidolite %	Remainder % *
A	~45	~25	~20	~55
B	~45	~20	~25	~55
C	~50	~20	~30	~50
D	~45	~20	~25	~55
E	~40	~25	~15	~60

J-16

Sample #7 (90-01-021) - (b) (6) [redacted]

Prep #	Total Asb.%	Chrysotile %	Crocidolite %	Remainder % *
A	~35	~10	~25	~65
B	~30	~12	~18	~70

Sample #8 (90-01-020) - (b) (6) [redacted]

Prep #	Total Asb.%	Chrysotile %	Crocidolite %	Remainder % *
A	~35-40	~14	~21-24	~60-65
B	~40	~20	~20	~60
C	~45	~27-1/2	~27-1/2	~55
D	~45	~27-1/2	~27-1/2	~55

Sample #9 (90-01-015) - (b) (6) [redacted]
(b) (6) [redacted]

Prep #	Total Asb.%	Chrysotile %	Crocidolite %	Remainder % *
A	~52*	~14	~36	~48
	*a few percent rigid asbestiform, morphology like Amosite but dispersion colors off.			
B	~55	~35	~20	~45
C	~48*	~10	~35	~52
	*2-3% rigid asbestiform, morphology like Amosite, but dispersion colors off.			
D	~50	~15	~35	~50
E	~30	~20	~10	~70

Sample #10 (90-01-014) (b) (6) [redacted]

Prep #	Total Asb.%	Chrysotile %	Crocidolite %	Remainder % *
A	~60	~36	~24	~40
B	~40	~24	~16	~60

#90-01-22 Portable Hi-Volume Air Sampler by Anderson - taken at Texaco facility, River Road (2nd lot back near 4th Street)

FLOW RATE: ~ 28 CUBIC FEET/MINUTE (for approximately 188 minutes)

TOTAL FLOW: 5354.45 FT.^{3}

TOTAL FIBERS: < 400 fibers (all cellulose, fiberglass, and vegetative fibers discounted on standard hi-vol filter at 100X magnification on PLM.)

TOTAL MEASURED FIBER COUNT: <400/5354.45 ft^3

CONVERTED TO APPROXIMATELY .000003 FIBERS/cc air or .0003% asbestos

DEB:pb

Attachments

000225.129

ATTACHMENT 2

EPA-ERT Asbestos Sampling SOP

(16 pages)

ASBESTOS SAMPLING

TABLE OF CONTENTS

1.0 SCOPE AND APPLICATION

2.0 METHOD SUMMARY
- 2.1 Sample Pumps
  - 2.1.A Personal Sampling Pumps
  - 2.1.B Hi Flow Pumps
- 2.2 Outdoor/Ambient Sampling
- 2.3 Indoor/Ambient Sampling
  - 2.3A Aggressive Sampling
  - 2.3B Aggressive Sampling Procedures

3.0 SAMPLE PRESERVATION, CONTAINERS, HANDLING, AND STORAGE
- 3.1 Filter Selection and Collection Device
- 3.2 Sample Handling Procedures

4.0 INTERFERENCES AND POTENTIAL PROBLEMS
- 4.1 NIOSH Method 7400 (PCM)
- 4.2 EPA TEM Method

5.0 EQUIPMENT
- 5.1 Equipment List - Personal Sampling Pump
- 5.2 Equipment List - High Flow Pump

6.0 REAGENTS

7.0 PROCEDURES
- 7.1 Field Procedures - Personal Sampling Pump
- 7.2 Field Procedures - High Flow Pump
- 7.3 Calibration Procedures

8.0 CALCULATION

9.0 QUALITY ASSURANCE/QUALITY CONTROL
- 9.1 Electronic Calibrator Procedures - Personal Sampling Pump
- 9.2 Electronic Calibrator Procedures - Rotometer
- 9.3 Sampling Pump Calibration - Rotometer

10.0 DATA VALIDATION

11.0 HEALTH AND SAFETY

12.0 REFERENCES

13.0 APPENDICES
- A. NIOSH Method 7400 - PCE
- B. EPA TEM Method

J-20

000225.131

ASBESTOS SAMPLING

1.0 SCOPE AND APPLICATION

The objective of this document is to provide a standard operating procedure (SOP) to be utilized by USEPA Environmental Response Team (ERT) and Response, Engineering, and Analytical Contract (REAC) for sampling asbestos fibers in indoor and outdoor/ambient air at hazardous waste sites.

Regulations pertaining to asbestos have been promulgated by EPA and OSHA. EPA's National Emission Standards for Hazardous Air Pollutants (NESHAP) regulates asbestos-containing waste materials. NESHAP establishes management practices and standards for the handling of asbestos and emissions from waste disposal operations (40 CFR Part 61, Subparts A and M).

EPA's 40 CFR 763 (July 1, 1987) [1] and its addendum 40 CFR 763 October 30, 1987 [2] provide comprehensive rules for the asbestos abatement industry.

State and local regulations on these issues vary and may be more stringent than federal requirements.

The OSHA regulations in 29 CFR 1910.1001 and 29 CFR 1926.58 specify work practices and safety equipment such as respiratory protection and protective clothing when handling asbestos.

The OSHA standard for an 8-hour, time-weighted average (TWA) is 0.2 fibers/cubic centimeters of air. This standard pertains to fibers with a length-to-width ratio of 3 to 1 with a fiber length >5 um [3,4].

Fibers less than 0.25 um in length will not be detected by Phase contract Microscopy. Transmission Electron Microscopy can detect very thin fibers typically down to 0.0025 um in diameter.

An action level of 0.1 fiber/cc (one-half the OSHA standard) is the level EPA has established in which employers must initiate such activities as air monitoring, employee training, and medical surveillance [3,4].

References to specific analytical methodologies are made throughout this document and can be found in the Appendices.

2.0 METHOD SUMMARY

Asbestos has been used in many commercial products including building materials such as flooring tiles and sheet goods; paints and coatings; insulation, and roofing asphalts. These products and others may be found at hazardous waste sites either hanging on overhead pipes, contained in drums, abandoned in piles, or as part of a structure. Asbestos tailing piles from mining operations can also be a source of ambient asbestos fibers.

Asbestos air sampling is conducted by drawing air through a filter at a known flow rate with a flow-controlled pump. The sample is then analyzed using Phase Contrast Microscopy (PCM) and/or Transmission Electron Microscopy (TEM).

PCM analysis is widely available and is less costly than TEM. TEM is considered the best method for identifying airborne asbestos. TEM can detect very thin fibers typically down to 0.0025 um in diameter.

When TEM (EPA) is compared with data from PCM (NIOSH), the TEM's aspect ratio of 5 to 1 should be modified to 3 to 1.

2.1 Sample Pumps

In order to determine if a sampling pump is measuring the flow rate or volume of air correctly, it is necessary to calibrate the instrument. Sampling pumps should be calibrated immediately before and after each use. Preliminary calibration should be conducted using a primary calibrator such as a soap bubble type calibrator, e.g., a Buck Calibrator, Gilibrator, or equivalent primary calibrator with a representative filter cassette installed between the pump and the calibrator. The representative sampling cassette can be reused for calibrating other pumps that will be used for asbestos sampling. The same cassette lot used for sampling should also be used for the calibration. A sticker should be affixed to the outside of the extension cowl marked "Calibration Cassette." A rotometer can be used provided it has been recently precalibrated with a primary calibrator. Three separate constant flow calibration readings should be obtained both before and after collecting the sample. Should the flow rate change by more than 5% during the sampling period, the average of the pre- and post-calibration rates will be used to calculate the total sample volume. Sampling pumps can be calibrated prior to coming on-site so that time is saved when performing on-site calibration.

J-22

2.1.A Personal Sampling Pumps

Personal sampling pumps are utilized when the flow rates are between .001 L/min to 5 L/min. Many lightweight portable pumps are capable of providing high or low volume air flow. See manufacturer's manual for pump operation.

2.1.B High Flow Pumps

High flow pumps are utilized when flow rates between 4 L/min to 16 L/min are required. High flow pumps are used for short sampling periods so as to obtain the desired sample volume. ERT uses the Gilian Aircon 520's. An equivalent high flow pump can also be used.

The high flow pumps usually run on AC power and can be plugged into a nearby outlet. If an outlet is not available then a generator should be obtained. The generator should be positioned downwind from the sampling pump. Additional voltage may be required if more than one pump is plugged into the same generator. Several electrical extension cords may be required if sampling locations are remote.

2.2 Outdoor/Ambient Sampling

ERT uses PCM analysis for outdoor/ambient air samples. When analysis shows total fiber count above the OSHA action level 0.1 f/cc then TEM can be used to identify asbestos from non-asbestos fibers. Some labs are able to perform PCM and TEM analysis on the same filter.

High volume pumps are, for the most part, used for outdoor sampling in low dusty areas. The samplers should be placed above ground level, about 4 to 5 feet high, away from obstructions that may influence air flow see Table 2.1.

Outdoor sampling usually requires flow rates between 10 to 15 L/min with a sample volume of 1000 to 5000 liters (PCM).

2.1.D.1 Environmental Data

Record wind speed, wind direction, temperature, and pressure in a field logbook. Wind direction is particularly important when monitoring for asbestos downwind from a fixed source. It is recommended that a meteorological station be established. If possible, sample after 2 to 3 days of dry weather and when the wind conditions are at 10 mph or greater.

TABLE 2.1. SAMPLING STATIONS

Sampling Station Location		Rationale
Upwind/Background	Collect a minimum of 2 simultaneous upwind/background samples 30o apart from the prevailing windlines.	Establishes background fiber levels.
Downwind	Deploy a minimum of 3 sampling stations in a 180o arc downwind from the source.	Indicates if asbestos is leaving the site.
Site Representative and/or Worse Case	Obtain one site representative sample which shows average condition on-site or obtain worse case sample (optional).	Verify and continually confirm and document selection of proper levels of worker protection.

*NOTE: More than one background station may be required if the asbestos originates from different sources.

000225.135

2.3 Indoor Sampling

ERT uses PCM analysis for indoor air samples. When analysis shows total fiber count above the OSHA action level 0.1 f/cc then TEM can be used to identify asbestos from nonasbestos fibers. See Section 2.0.

Sampling pumps should be placed 4 to 5 feet above ground level away from obstructions that may influence air flow. The pump can be placed on a table or counter. See Table 2.2.

Indoor sampling generally utilizes high flow rates and increased sample volumes in order to obtain lower detection limits, i.e., 0.01 f/cc or lower (PCM) and 0.005 structures/cc or lower (TEM).

2.3.A Aggressive Sampling

Sampling equipment at fixed locations may fail to detect the presence of fiber. Due to limited air movement, many fibers may settle out of the air onto the floor and other surfaces and may not be captured on the filter. In the past an 8-hour sampling period was recommended to cover various air circulation conditions. A quicker and more effective way to capture asbestos fibers is to circulate the air artificially so that the fibers remain airborne during sampling. The results from this sampling option typify worse case condition. This is referred to as aggressive air sampling for asbestos. For more detailed information see [7.4].

Note: The individual performing this task should follow regulations regarding respiratory protection 29 CFR 1910.1001

2.3.B Aggressive Sampling Procedures

1. Before starting the sampling pumps, direct forced air (such as a 1-horsepower leaf blower or large fan) against walls, ceilings, floors, ledges, and other surfaces in the room to initially dislodge fibers from surfaces. This should take at least 5 minutes per 1000 sq. ft. of floor.

2. Place a 20-inch fan in the center of the room. (Use one fan per 10,000 cubic feet of room space.) Place the fan on slow speed and point it toward the ceiling.

3. Start the sampling pumps and sample for the required time.

4. Turn off the pump and then the fan(s) when sampling is complete.

3.0 SAMPLE PRESERVATION, CONTAINERS, HANDLING, AND STORAGE

3.1 Filter selection and collection device.

The filter selection and collection device for sample collection will depend upon which analytical methodology is utilized.

a) NIOSH Method 7400: Phase Contrast Microscopy involves using a 0.8 to 1.2 um cellulose ester membrane, 25 mm diameter; 50 mm conductive cowl on cassette (see Figure 3.1).

b) EPA Transmission Electron Microscopy involves using a 25 mm filter cassette with either a polycarbonate filter having a pore size $\leq$0.4 um or mixed cellulose ester filter (MCE) having a pore size $\leq$0.45 um. This cassette includes an extension cowl, a 5.0 um MCE backup filter, to serve as a diffuser, and a support pad (see Figure 3.2).

3.2 Sample Handling Procedures

1. Place a sample label on the cassette indicating a unique sampling number. Do not put sampling cassettes in shirt or coat pockets as the filter can pick up fibers. ERT uses the original cassette box to hold the samples.

2. Wrap the cassette individually in a plastic sample bag. Each bag should be marked indicating sample identification number, total volume, and date.

3. The wrapped sampling cassettes should be placed upright in a rigid container so that the cassette cap is on top and cassette base is on bottom. Use enough packing material to prevent jostling or damage. If possible, hand carry to lab.

4. Provide appropriate documentation with samples, i.e., chain of custody and requested analytical methodology.

5. Follow all QA/QC requirements from the lab as well as from the PCM/TEM analytical methodology, i.e., field blank, lot blank requirements.

000225.137

TABLE 2.2. SAMPLING STATIONS

Sampling Station Location		Rationale
Indoor Sampling	If a work site is a single room, disperse 5 samplers throughout the room.	Establishes representative samples from a homogeneous area.
	If the worksite contains up to 5 rooms, place at least one sampler in each room.	
	If the worksite contains more than 5 rooms, select a representative sample of the rooms.	
Upwind/Background	If outside sources are suspected, deploy a minimum of two simultaneous upwind/background samples 30o apart from the prevailing windlines.	Establishes whether indoor asbestos concentrations are coming from an outside source.
Worse Case	Obtain one worse case sample, i.e., aggressive sampling (optional).	Verify and continually confirm and document selection of proper levels of worker protection.

000225.138

4.0 INTERFERENCES AND POTENTIAL PROBLEMS

Flow rates should not exceed 16 L/min due to the possibility of asbestos fiber disintegration upon contact with the filter.

4.1 NIOSH Method 7400, PCM (can be found in Appendix A).

Limitations:

1. PCM cannot distinguish asbestos from nonasbestos fibers. All particles meeting the counting criteria are counted as total asbestos fibers.

2. Fiber less than 0.25 um in length will not be detected by this method.

3. High levels of non-fibrous dust particles may obscure fibers in the field of view and increase the detection limit.

4.2 EPA's TEM method (can be found in Appendix B).

Limitations

1. High concentrations of background dust interfere with fiber identification.

000225.139

5.0 EQUIPMENT

5.1 Equipment List - Personal Sampling Pump

1. Personal sampling pump (etc. Gilian Personal Sampler).
2. Inert tubing with glass cyclone and hose barb.
3. Sampling cassettes with conductive cowl.
4. Appropriate membrane filters.
5. Rotometers.
6. Whirlbags for cassettes.
7. Tools - small screw drivers.
8. Sample labels.
9. Air data sheets.
10. Container - to keep samples upright.

5.2 Equipment List - High Flow Pump

1. High flow pump (etc. Gilian Aircon).
2. Generator or electrical outlet.
3. Extension cords.
4. Rotometers.
5. Inert tubing - unless provided with pump.
6. Sampling cassettes with conductive cowl.
7. Appropriate membrane filters.
8. Whirlbags for cassettes.
9. Sample labels.
10. Air data sheets.
11. Container - to keep samples upright.

6.0 REAGENTS

There are no reagents used in the sampling phase or the analytical phase of Asbestos Sampling.

7.0 PROCEDURES

7.1 Field Procedures - Personal Sampling Pump

1. Charge the unit for the maximum required time as indicated in the manufacturer's manual.
2. Once on-site in the clean zone follow the calibration procedures in Section 9.1-9.3.
3. Mobilize to the sampling location.
4. To set up the sampling train, attach one end of the Polyvinyl Chloride (PVC) tubing (approx. 2 ft) to the cassette base; attach the other end of the tubing to the inlet plug on the pump (see Figure 7.1). The attachment between the cassette base and the tubing can best be achieved by using a hose barb with cyclone.
5. Place the sampling pump 6 ft. above ground level (in the breathing zone) and in an area that will not be affected by unusual air flow. The sampling pump and cassette can be placed on a sturdy structure, attached to a dowel rod or hooked to an object, i.e., fence.
6. Remove the cassette cap from the extension cowl (open faced) and orient the cassette perpendicular to the wind.
7. Adjust the time on the pump. If the pump is programmable turn past the zero mark before setting the actual time.
8. Turn the pump on.
9. Record the following in a field logbook:

    a. Date, time, location (area or room), sample identification number, and pump number.
    b. Flow rate and desired total sampling time.

10. Record weather data (i.e. ambient temperature, wind direction, windspeed, precipitation).
11. Check the pump at midpoint of the sampling period if longer than 4 hours.
12. If a filter darkens in appearance of if loose dust is seen in the filter, a second sample should be started.
13. At the end of the sampling period, check the fault button to obtain pump sampling time. (This indicates whether or not the pump ran the full programmable timespan). Be sure to orient the cassette in an upright position to prevent fibers from falling from the filter when the vacuum is released.
14. Record the pump run time (finish time minus start time).
15. Perform post calibration procedures as shown in Section 9.0
16. Record the post flow rate in a field logbook.
17. Remove the PVC tubing from the sampling cassette. Still holding the cassette upright, replace the inlet plug on the cassette cap.
18. Place the outlet plug on the cassette base.
19. Refer to Section 3.2, Steps 1-5 for sample handling procedures.

J-30

000225.141

7.2 Field Procedures - High Flow Pump

The following instructions are for a Gilian Aircon 520 Constant High Flow Air Sampler and is used for illustrative purposes; an equivalent high flow pump can be used instead.

1. Once on-site the calibration is performed in the clean zone. The calibration procedures for personal sampling pumps listed in Section 9.1 are also applicable to high volumes sampling pumps.
2. After calibrating the high volume sampler, mobilize to the sampling location.
3. To set up the sampling train, attach the air intake hose to the cassette base. Remove the cassette cap. The cassette should be positioned perpendicular to the wind (See Figure 7.2).
4. Turn the generator on. The generator should be placed 10 ft. downwind from the sampling pump.
5. Record the pumps cumulative time (if applicable).
6. Record the following in a field logbook:
   a. Date, time, location, sample identification number, and pump number.
   b. Flow rate and cumulative time.
7. Record weather: wind speed, ambient temperature, wind direction, and precipitation.
8. Turn the pump on.
9. Check the pump at sampling midpoint if longer than 4 hours.
10. At the end of the sampling period, orient the cassette up, turn the pump off.
11. Record the cumulative time (if applicable).
12. Check the flow rate as shown in section 9.0. The sampling cap is replaced before calibrating.
13. Record the post flow rate.
14. Remove the tubing from the sampling cassette. Still holding the cassette upright, replace the inlet plug on the cassette cap and the outlet plug on the cassette base.
15. Refer to Section 3.2 steps 1-5 for sample handling procedures.

7.3 Calibration Procedures

EPA/ERT uses an electronic calibrator for calibrating rotometers and pumps. Refer to Section 9.1-9.3 for calibration procedures.

8.0 CALCULATIONS

8.1 Sample volume and flow rate

The sampling volumes are determined on the basis of how many fibers need to be collected for reliable measurements. Therefore, one must estimate how many airborne fibers may be in the sampling location.

Since the concentration of airborne aerosol contaminants will have some effect on the sample, the following is a suggested criteria to assist in selecting a flow rate based on real-time aerosol monitor readings in mg/m3.

		Concentration	Flow Rate
1.	Low real-time monitor readings:	<6.0 mg/m3	11-15 L/min
2.	Medium real-time monitor readings:	≥6.0 mg/m3	7.5 L/min
3.	High real-time monitor readings:	≥10 mg/m3	2.5 L/min

a) PCM utilizes flow rates between 0.5 L/min and 16 L/min. Sampling time is adjusted to obtain optimum fiber loading on the filter. A sampling rate of 1 to 4 L/min for 8 hrs is appropriate in non-dusty atmospheres containing 0.1 fiber/cc. Dusty atmospheres i.e., areas with high levels of asbestos, require smaller sample volumes (<400 L) to obtain countable samples. In such cases, take short, consecutive samples and average the results over the total collection time. For documenting episodic exposures, use high flow rates (7 to 16 L/min) over shorter sampling times. In relatively clean atmospheres where targeted fiber concentrations are much less than 0.1 fiber/cc, use larger sample volumes (3,000 to 10,000 L) to achieve quantifiable loadings. Take care, however, not to overload the filter with background dust. If ≥ 50% of the fiber surface is covered with particles, the filter may be too overloaded to count and will bias the measured fiber concentration. Do not exceed 0.5 mg total dust loading on the filter.

b) EPA's TEM requires a minimum volume of 560 liters (L) and a maximum volume of 3,800 L in order to obtain an analytical sensitivity of 0.005 structures/cc. The optimal volume for TEM is 1200 L to 1800 L. These volumes are determined using a 200 mesh EM grid opening with a 25-mm filter cassette. Changes in volume would be necessary if a 37-mm filter cassette is used since the effective area of a 25 mm (385 sq mm) and 37 mm (855 sq m) differ. (See Table 1 in the TEM Methodology, Appendix B.)

J-32

000225.143

9.0 QUALITY ASSURANCE/QUALITY CONTROL

Follow all QA/QC requirements listed in the analytical method.

Generally field blanks are required for each set of samples or 10% of the total samples, whichever is greater.

The laboratory analyzing the samples should determine the lot blank requirements. There should be no less than 1 lot blank per cassette lot.

9.1 Calibrating a personal sampling pump with an electronic calibrator.

1. See manufacturer's manual for operational instructions.
2. Set up the calibration train as shown in Figure 9.1 using a sampling pump, electronic calibrator, and a representative filter cassette. The same lot sampling cassette used for sampling should also be used for calibrating.
3. To set up the calibration train, attach one end of the PVC tubing (approx. 2 foot) to the cassette base; attach the other end of the tubing to the inlet plug on the pump. Another piece of tubing is attached from the cassette cap to the electronic calibrator.
4. Turn the electronic calibrator and sampling pump on. Create a bubble at the bottom of the flow chamber by pressing the bubble initiate button. The bubble should rise to the top of the flow chamber. After the bubble runs its course, the flow rate is shown on the LED display.
5. Turn the flow adjust screw or knob on the pump until the desired flow rate is attained.
6. Perform the calibration 3 times until the desired flow rate of ± 5% is attained.

9.2 Calibrating a rotometer with an electronic calibrator.

1. See manufacturer's manual for operational instructions.
2. Set up the calibration train as shown in Figure 9.2 using a sampling pump, rotometer, and electronic calibrator.
3. Assemble the base of the flow meter with the screw provided and tighten in place. The flow meter should be mounted within 6o vertical.
4. Turn the electronic calibrator and sampling pump on.
5. Create a bubble at the bottom of the flow chamber by pressing the bubble initiate button. The bubble should rise to the top of the flow chamber. After the bubble runs its course, the flow rate is shown on the LED display.
6. Turn the flow adjust screw or knob on the pump until the desired flow rate is attained.

7. Record the electronic calibrator flow rate reading and the corresponding rotometer reading. Indicate these values on the rotometer (sticker). The rotometer should be able to work within the desired flow range.
8. Perform the calibration 3 times until the desired flow rate of ± 5% is attained.

Once on site, a secondary calibrator, i.e., rotometer is used to calibrate sampling pumps.

9.3 Calibrating a sampling pump with a rotômeter.

1. See manufacturer's manual for Rotometer's Operational Instructions.
2. Set up the calibration train as shown in Figure 9.3 using a rotometer, sampling pump, and a representative sampling cassette.
3. To set up the calibration train, attach one end of the PVC tubing (approx. 2 ft) to the cassette base; attach the other end of the tubing to the inlet plug on the pump. Another piece of tubing is attached from the cassette cap to the rotometer.
4. Assemble the base of the flow meter with the screw provided and tighten in place. The flow meter should be mounted within 6o vertical.
5. Turn the sampling pump on.
6. Turn the flow adjust screw (or knob) on the personal sampling pump until the float ball on the rotometer is lined up with the precalibrated flow rate value. A sticker on the rotometer should indicate this value.
7. A verification of calibration is generally preformed on-site in the clean zone immediately prior to the sampling.

J-34

000225.145

10.0 DATA VALIDATION

PCM analysis does not distinguish between asbestos and non-asbestos fibers, all fibers meeting the criteria are counted. TEM analysis can distinguish asbestos from non-asbestos fibers. This method of analysis should be used when the total fiber count is above the action level (or level of concern) so as to determine whether the airborne fiber is of asbestos origin.

Note: The flow rate and time should be adjusted to obtain optium fiber loading on the filter.

11.0 HEALTH AND SAFETY

When entering an unknown situation involving asbestos, a powered air purifying respirator (PAPR) (full face-piece) is necessary in conjunction with HEPA filter cartridges. See applicable regulations for action level, PEL, TLV, etc. If previous sampling indicates asbestos concentrations are below the action level, then EPA Level D personal protection is adequate.

12.0 REFERENCES

1. U.S. Environmental Protection Agency. Code of Federal Regulations 40 CFR 763. July 1, 1987.

2. U.S. Environmental Protection Agency. Asbestos-Containing Materials in Schools; Final Rule and Notice. 52 FR 41826.

3. Occupational Safety and Health Administration. Code of Federal Regulations 29 CFR 1910.1001. Washington, D.C. 1987.

4. Occupational Safety and Health Administration. Code of Federal Regulations 29 CFR 1926.58. Washington, D.C. 1987.

5. National Institute for Occupational Safety and Health. NIOSH Manual of Analytical Method. Third Edition. 1987.

6. Turpin, Rodney. Generic Asbestos Air Monitoring Guide for Hazardous Sites. U.S. Environmental Protection Agency Environmental Response Team. January 1985.

7. U.S. Environmental Protection Agency. Field Standard Operating Procedures (FSOP) #8 Air Surveillance, Office of Emergency and Remedial Response, Hazardous Response Support Division, Environmental Response Team. January 1985.

8. Keyes, D.L., Price, B.P., and Chesson, J. Guidance for Controlling Asbestos-Containing Materials in Buildings; U.S. Environmental Protection Agency, EPA 560/5-85-024. June 1985.

ATTACHMENT 3

NIOSH Method 7400

(13 pages)

FORMULA: various

M.W.: various

FIBERS

METHOD: 7400
ISSUED: 2/15/84
REVISION #2: 8/15/87

OSHA: 0.2 asbestos fibers (> 5 µm long)/mL [1]
NIOSH: 0.1 asbestos f/mL [1]; 3 glass fibers (>10 µm x <3.5 µm)/mL [3]
ACGIH: 0.2 crocidolite; 0.5 amosite; 2 chrysotile and other asbestos, f/mL

PROPERTIES: solid, fibrous

SYNONYMS: actinolite asbestos [CAS #13768-00-8], grunerite asbestos (amosite) [CAS #12172-73-5], anthophyllite asbestos [CAS #17068-78-9], chrysotile asbestos [CAS #12001-29-5], crocidolite asbestos [CAS #12001-28-4], tremolite asbestos [CAS #14567-73-8]; fibrous glass.

SAMPLING

SAMPLER: FILTER
(0.8- to 1.2- µm cellulose ester membrane, 25-mm diameter; conductive cowl on cassette)

FLOW RATE*: 0.5 to 16 L/min (see step 4)

VOL-MIN*: 400 L @ 0.1 fiber/mL (see step 4)
-MAX*: (see step 4)
*Adjust for 100 to 1300 fibers/mm² (step 4)

SHIPMENT: routine (securely packed to reduce shock)

SAMPLE STABILITY: stable

FIELD BLANKS: 10% (≥2) of samples

ACCURACY

RANGE STUDIED: 80 to 100 fibers counted

BIAS: see EVALUATION OF METHOD

OVERALL PRECISION (s_r): 0.115 to 0.13 (A Rules) [3]

MEASUREMENT

TECHNIQUE: LIGHT MICROSCOPY, PHASE CONTRAST

ANALYTE: fibers (manual count)

SAMPLE PREPARATION: acetone/triacetin "hot block" method [5]

COUNTING RULES: Set A (required by OSHA; [1,4]) or Set B (modified CRS [6])

EQUIPMENT:
1. positive phase-contrast microscope
2. Walton-Beckett graticule (100-µm field of view): A Rules use Type G-22; B Rules use Type G-24
3. phase-shift test slide (HSE/NPL)

CALIBRATION: HSE/NPL test slide

RANGE: 100 to 1300 fibers/mm² filter area

ESTIMATED LOD: 7 fibers/mm² filter area

PRECISION: 0.10 to 0.12 (A Rules) [3] (see Evaluation of Method:B)

APPLICABILITY: The method gives an index of airborne fibers in workplace atmospheres. Phase contrast microscopy will not differentiate between asbestos and other fibers; use this method in conjunction with electron microscopy (e.g., Method 7402) for positive identification. Fibers < ca. 0.25 µm diameter will not be detected by this method [7].

INTERFERENCES: Any other airborne fiber may interfere since all particles meeting the counting criteria are counted. Chain-like particles may appear fibrous. High levels of non-fibrous dust particles may obscure fibers in the field of view and increase the detection limit.

OTHER METHODS: This method introduces changes for improved sensitivity and reproducibility. It replaces P&CAM 239 [4,8] and Method 7400, Revision #1 (dated 5/15/85).

J-37

000225.148

REAGENTS:

1. Acetone.*
2. Triacetin (glycerol triacetate), reagent grade.

*See SPECIAL PRECAUTIONS.

EQUIPMENT:

1. Sampler: field monitor, 25-mm, three-piece cassette with ca. 50-mm electrically-conductive extension cowl and cellulose ester filter, 0.8- to 1.2-µm pore size, and backup pad.
   NOTE 1: Analyze representative filters for fiber background before use. Discard the filter lot if mean is ≥ 5 fibers per 100 graticule fields. These are defined as laboratory blanks.
   NOTE 2: Use an electrically-conductive extension cowl to reduce electrostatic effects. Ground the cowl when possible during sampling.
2. Personal sampling pump, 0.5 to 16 L/min (see step 4 for flow rate), with flexible connecting tubing.
3. Microscope, positive phase contrast, with green or blue filter, 8 to 10X eyepiece, and 40 to 45X phase objective (total magnification ca. 400X); numerical aperture = 0.65 to 0.75.
4. Slides, glass, frosted-end, pre-cleaned, 25 x 75 mm.
5. Cover slips, 22 x 22 mm, No. 1-1/2, unless otherwise specified by microscope manufacturer.
6. Lacquer or nail polish.
7. Knife, #10 surgical steel, curved blade.
8. Tweezers.
9. Heated aluminum block for clearing filters on glass slides (see ref. [5] for instructions on manufacture).
10. Micropipets, 5-µL and 100- to 500-µL.
11. Graticule, Walton-Beckett type with 100-µm diameter circular field (area = 0.00785 mm^2)at the specimen plane (Type G-22 for A Rules; Type G-24 for B Rules). Available from PTR Optics Ltd., 145 Newton Street, Waltham, MA 02154 [phone (617) 891-6000] and McCrone Accessories and Components, 850 Pasquinelli Drive, Westmont, IL 60559 [phone (312) 887-7100].
    NOTE: The graticule is custom-made for each microscope. Specify disc diameter needed to fit exactly the ocular of the microscope and the diameter (mm) of the circular counting area (see APPENDIX A).
12. HSE/NPL phase contrast test slide, Mark II. Available from PTR Optics Ltd. (address above).
13. Telescope, ocular phase-ring centering.
14. Stage micrometer (0.01-mm divisions).
15. Wire, multi-stranded, 22-gauge.

SPECIAL PRECAUTIONS: Acetone is extremely flammable. Take precautions not to ignite it. Heating of acetone in volumes greater than 1 mL must be done in a ventilated laboratory fume hood using a flameless, spark-free heat source.

SAMPLING:

1. Calibrate each personal sampling pump with a representative sampler in line.

J-38

000225.149

2. For personal sampling, fasten sampler to the worker's lapel near the worker's mouth. Remove top cover from cowl extension (open face) and orient face down. Wrap joint between cowl and monitor body with shrink tape to prevent air leaks.
   NOTE: If possible, ground the cassette to remove any surface charge, using a wire held in contact (e.g., with a hose clamp) with the conductive cowl and a non-electrical metal fixture, or a cold-water pipe.
3. Submit at least two field blanks (or 10% of the total samples, whichever is greater) for each set of samples. Remove top covers from the field blank cassettes and store top covers and cassettes in a clean area (bag or box) with the top covers from the sampling cassettes during the sampling period. Replace the top covers in the cassettes after sampling.
4. Sample at 0.5 L/min or greater [9]. Adjust sampling flow rate, Q (L/min), and time, t (min), to produce a fiber density, E, of 100 to 1300 fibers/mm² ($3.85 \cdot 10^4$ to $5 \cdot 10^5$ fibers per 25-mm filter with effective collection area $A_c = 385$ mm²) for optimum accuracy. These variables are related to the action level (one-half the current standard), L (fibers/mL), of the fibrous aerosol being sampled by:

$$t = \frac{(A_c)(E)}{(Q)(L)10^3}.$$

   NOTE 1: The purpose of adjusting sampling times is to obtain optimum fiber loading on the filter. A sampling rate of 1 to 4 L/min for 8 hrs is appropriate in non-dusty atmospheres containing ca. 0.1 fiber/mL. Dusty atmospheres require smaller sample volumes ($\leq$400 L) to obtain countable samples. In such cases take short, consecutive samples and average the results over the total collection time. For documenting episodic exposures, use high flow rates (7 to 16 L/min) over shorter sampling times. In relatively clean atmospheres, where targeted fiber concentrations are much less than 0.1 fiber/mL, use larger sample volumes (3000 to 10000 L) to achieve quantifiable loadings. Take care, however, not to overload the filter with background dust. If $\geq$ 50% of the filter surface is covered with particles, the filter may be too overloaded to count and will bias the measured fiber concentration.
   NOTE 2: OSHA regulations specify a maximum sampling rate of 2.5 L/min [1].
5. At the end of sampling, replace top cover and small end caps.
6. Ship samples with conductive cowl attached in a rigid container with packing material to prevent jostling or damage.
   NOTE: Do not use untreated polystyrene foam in shipping container because electrostatic forces may cause fiber loss from sample filter.

SAMPLE PREPARATION:

NOTE: The object is to produce samples with a smooth (non-grainy) background in a medium with refractive index $\leq$ 1.46. This method collapses the filter for easier focusing and produces permanent mounts which are useful for quality control and interlaboratory comparison. The aluminum "hot block" technique may be used outside the laboratory [5]. Other mounting techniques meeting the above criteria may also be used (e.g., the laboratory fume hood procedure for generating acetone vapor as described in Method 7400 - revision of 5/15/85, or the non-permanent field mounting technique used in P&CAM 239 [2,4,8,22]). A videotape of the mounting procedure is available from the NIOSH Publication Office [20].

7. Ensure that the glass slides and cover slips are free of dust and fibers.
8. Adjust the rheostat to heat the "hot block" to ca. 70 °C [5].
   NOTE: If the "hot block" is not used in a fume hood, it must rest on a ceramic plate and be isolated from any surface susceptible to heat damage.

000225.150

9. Mount a wedge cut from the sample filter on a clean glass slide.
   a. Cut wedges of ca. 25% of the filter area with a curved-blade steel surgical knife using a rocking motion to prevent tearing. Place wedge, dust side up, on slide.
      NOTE: Static electricity will usually keep the wedge on the slide.
   b. Insert slide with wedge into the receiving slot at base of "hot block". Place tip of a micropipet containing ca. 250 µL acetone into the inlet port of the PTFE cap on top of the "hot block". Inject the acetone into the vaporization chamber with a slow, steady pressure on the plunger button while holding pipet firmly in place. After waiting 3 to 5 sec for the filter to clear, remove pipet and slide from their ports.
      CAUTION: Although the volume of acetone used is small, use safety precautions. Work in a well-ventilated area (e.g., laboratory fume hood). Take care not to ignite the acetone. Continuous, frequent use of this device in an unventilated space may produce explosive acetone vapor concentrations.
   c. Using the 5-µL micropipet, immediately place 3.0 to 3.5 µL triacetin on the wedge. Gently lower a clean cover slip onto the wedge at a slight angle to reduce bubble formation.
      NOTE: If too many bubbles form or the amount of triacetin is insufficient, the cover slip may become detached within a few hours. If excessive triacetin remains at the edge of the filter under the cover slip, fiber migration may occur.
   d. Glue the edges of the cover slip to the slide using lacquer or nail polish [10] Counting may proceed immediately after clearing and mounting are completed.
      NOTE: If clearing is slow, warm the slide on a hotplate (surface temperature 50 °C) for up to 15 min to hasten clearing. Heat carefully to prevent gas bubble formation.

CALIBRATION AND QUALITY CONTROL:

10. Microscope adjustments. Follow the manufacturers instructions. At least once daily use the telescope ocular supplied by the manufacturer to ensure that the phase rings (annular diaphragm and phase-shifting elements) are concentric. With each microscope, keep a logbook in which to record the dates of microscope cleanings, adjustments, and calibrations.
    a. Each time a sample is examined, do the following:
       (1) Adjust the light source for even illumination across the field of view at the condenser iris. With some microscopes, the illumination may have to be set up with bright field optics rather than phase contract optics.
           NOTE: Use Köhler illumination if available.
       (2) Focus on the particulate material to be examined.
       (3) Make sure that the field iris is in focus, centered on the sample, and open only enough to fully illuminate the field of view.
    b. Check the phase-shift detection limit of the microscope periodically for each analyst/microscope combination:
       (1) Center the HSE/NPL phase-contrast test slide under the phase objective.
       (2) Bring the blocks of grooved lines into focus in the graticule area.
           NOTE: The slide contains seven blocks of grooves (ca. 20 grooves per block) in descending order of visibility. For asbestos counting the microscope optics must completely resolve the grooved lines in block 3 although they may appear somewhat faint, and the grooved lines in blocks 6 and 7 must be invisible when observing them in the center of the graticule area. Blocks 4 and 5 must be at least partially visible but may vary slightly in visibility between microscopes. A microscope which fails to meet these requirements has resolution either too low or too high for fiber counting.
       (3) If image quality deteriorates, clean the microscope optics. If the problem persists, consult the microscope manufacturer.

J-40

000225.151

11. Document the laboratory's precision for each counter for replicate fiber counts.
    a. Maintain as part of the laboratory quality assurance program a set of reference slides to be used on a daily basis. These slides should consist of filter preparations including a range of loadings and background dust levels from a variety of sources including both field and PAT samples. The Quality Assurance Officer should maintain custody of the reference slides and should supply each counter with a minimum of one reference slide per workday. Change the labels on the reference slides periodically so that the counter does not become familiar with the samples.
    b. From blind repeat counts on reference slides, estimate the laboratory intra- and intercounter s_r (see step 21). Obtain separate values of relative standard deviation for each sample matrix analyzed in each of the following ranges: 5 to 20 fibers in 100 graticule fields, 21 to 50 fibers in 100 graticule fields, 51 to 100 fibers in 100 graticule fields, and 100 fibers in less than 100 graticule fields. Maintain control charts for each of these data files.

    NOTE 1: Since fiber counting is the measurement of randomly placed fibers which may be described by a Poisson distribution, a square root transformation of the fiber count data will result in approximately normally distributed data.

    NOTE 2: Certain sample matrices (e.g., asbestos cement) have been shown to give poor precision [6]

12. Prepare and count field blanks along with the field samples. Report counts on each field blank.

    NOTE 1: The identity of blank filters should be unknown to the counter until all counts have been completed.

    NOTE 2: If a field blank yields greater than 7 fibers per 100 graticule fields, report possible contamination of the samples.

13. Perform blind recounts by the same counter on 10% of filters counted (slides relabeled by a person other than the counter). Use the following test to determine whether a pair of counts by the same counter on the same filter should be rejected because of possible bias: Discard the sample if the difference between the two counts exceeds $2.77\ (X)s_r$, where X = average of the two fiber counts and s_r = intracounter relative standard deviation from step 11.

    NOTE: If a pair of counts is rejected by this test, recount the remaining samples in the set and test the new counts against the first counts. Discard all rejected paired counts. It is not necessary to use this statistic on blank counts.

14. Enroll each new counter in a training course which compares performance of counters on a variety of samples using this procedure.

    NOTE: All laboratories engaged in asbestos counting should participate in a proficiency testing program such as the AIHA-NIOSH Proficiency Analytical Testing (PAT) Program and routinely exchange field samples with other laboratories to compare performance of counters.

MEASUREMENT:

15. Center the slide on the stage of the calibrated microscope under the objective lens. Focus the microscope on the plane of the filter.
16. Adjust the microscope (Step 10) [7].

    NOTE: Calibration with the HSE/NPL test slide determines the minimum detectable fiber diameter (ca. 0.25 µm).

17. Select one of the following sets of counting rules:

    NOTE: The two sets of rules have produced approximately equivalent mean counts on a variety of asbestos sample types [6]. OSHA regulations require the use of the A rules [1]. In either case, the rules must be strictly followed to obtain valid results. No hybridizing of the two sets of rules is permitted.

J-41

000225.152

a. A Rules (same as P&CAM 239 rules [2,4,8]; see APPENDIX B).
   1. Count only fibers longer than 5 µm. Measure length of curved fibers along the curve.
   2. Count only fibers with a length-to-width ratio equal to or greater than 3:1.
   3. For fibers which cross the boundary of the graticule field:
      a. Count any fiber longer than 5 µm which lies entirely within the graticule area.
      b. Count as 1/2 fiber any fiber with only one end lying within the graticule area, provided that the fiber meets the criteria of rules a.1. and a.2.
      c. Do not count any fiber which crosses the graticule boundary more than once.
      d. Reject and do not count all other fibers.
   4. Count bundles of fibers as one fiber unless individual fibers can be identified by observing both ends of a fiber.
   5. Count enough graticule fields to yield 100 fibers. Count a minimum of 20 fields. Stop at 100 graticule fields regardless of count.

b. B Rules (see APPENDIX B)
   1. Count only ends of fibers. Each fiber must be longer than 5 µm and less than 3 µm diameter.
   2. Count only ends of fibers with a length-to-width ratio equal to or greater than 5:1.
   3. Count each fiber end which falls within the graticule area as one end, provided that the fiber meets rules b.1 and b.2. Add split ends to the count as appropriate if the split fiber segment also meets the criteria of rules b.1 and b.2.
   4. Count visibly free ends which meet rules b.1 and b.2 when the fiber appears to be attached to another particle, regardless of the size of the other particle. Count the end of a fiber obscured by another particle if the particle covering the fiber end is less than 3 µm in diameter.
   5. Count free ends of fibers emanating from large clumps and bundles up to a maximum of 10 ends (5 fibers), provided that each segment meets rules b.1 and b.2.
   6. Count enough graticule fields to yield 200 ends. Count a minimum of 20 graticule fields. Stop at 100 graticule fields, regardless of count.
   7. Divide total end count by 2 to yield fiber count.

18. Start counting from the tip of the filter and progress along a radial line to the outer edge. Shift up or down on the filter, and continue in the reverse direction. Select graticule fields randomly by looking away from the eyepiece briefly while advancing the mechanical stage. Ensure that, as a minimum, each analysis covers one radial line from the filter center to the outer edge of the filter. When an agglomerate covers ca. 1/6 or more of the graticule field, reject the graticule field and select another. Do not report rejected graticule fields in the total number counted.

NOTE 1: When counting a graticule field, continuously scan a range of focal planes by moving the fine focus knob to detect very fine fibers which have become embedded in the filter. The small-diameter fibers will be very faint but are an important contribution to the total count. A minimum counting time of 15 seconds per field is appropriate for accurate counting.

NOTE 2: This method does not allow for differentiation of fibers based on morphology. Although some experienced counters are capable of selectively counting only fibers which appear to be asbestiform, there is presently no accepted method for ensuring uniformity of judgment between laboratories. It is, therefore, incumbent upon all laboratories using this method to report total fiber counts. If serious contamination from non-asbestos fibers occurs in samples, other techniques such as transmission electron microscopy must be used to identify the asbestos fiber fraction present in the sample (see NIOSH Method 7402). In some cases (i.e., for fibers with diameters > 1 µm), polarized light microscopy (e.g., NIOSH Method 7403) may be used to identify and eliminate interfering non-crystalline fibers.

J-42

000225.153

CALCULATIONS AND REPORTING OF RESULTS:

19. Calculate and report fiber density on the filter, E (fibers/mm²), by dividing the total fiber count per graticule field, F/n_f, minus the mean field blank count per graticule field, B/n_b, by the graticule field area, A_f (0.00785 mm² for a properly calibrated Walton-Beckett graticule):

$$E = \frac{\left(\frac{F}{n_f} - \frac{B}{n_b}\right)}{A_f}, \text{ fibers/mm}^2.$$

NOTE: Fiber counts above 1300 fibers/mm² and fiber counts from samples with > 50% of filter area covered with particulate should be reported as "uncountable" or "probably biased."

20. Calculate and report the concentration, C (fibers/mL), of fibers in the air volume sampled, V (L), using the effective collection area of the filter, A_c (385 mm² for a 25-mm filter):

$$C = \frac{(E)(A_c)}{V \cdot 10^3}.$$

NOTE: Periodically check and adjust the value of A_c, if necessary.

21. Report intralaboratory and interlaboratory relative standard deviations (from Step 11) with each set of results.

NOTE: Precision depends on the total number of fibers counted [4,11]. Relative standard deviation (also called coefficient of variation) is documented in references [4,11,12,13] for fiber counts up to 100 fibers in 100 graticule fields. Comparability of interlaboratory results is discussed below. As a first approximation, use 213% above and 49% below the count as the upper and lower confidence limits for fiber counts greater than 20 (Fig. 1).

EVALUATION OF METHOD:

A. This method is a revision of P&CAM 239 [2,4,8]. A summary of the revisions is as follows:

1. Sampling:
   The change from a 37-mm to a 25-mm filter improves sensitivity for similar air volumes. The change in flow rates allows for 2-m³ full-shift samples to be taken, providing that the filter is not overloaded with non-fibrous particulates. The collection efficiency of the sampler is not a function of flow rate in the range 0.5 to 16 L/min [9].
2. Sample Preparation Technique:
   The acetone vapor-triacetin preparation technique is a faster, more permanent mounting technique than the dimethyl phthalate/diethyl oxalate method of P&CAM 239 [2,4,5,8,14]. The aluminum "hot block" technique minimizes the amount of acetone needed to prepare each sample.
3. Measurement:
   a. The Walton-Beckett graticule standardizes the area observed [14,15].
   b. The HSE/NPL test slide standardizes microscope optics for sensitivity to fiber diameter [7,14].

J-43

000225.154

c. An international collaborative study involved 16 laboratories using prepared slides from the asbestos cement, milling, mining, textile, and friction material industries [6]. The modified CRS (NIOSH B) Rules were found to yield equivalent counts but were more precise than the AIA (NIOSH A)* Rules. The relative standard deviations (s_r) varied with sample type and laboratory. The ranges were:

	s_r		
	Intralaboratory	Interlaboratory	Overall
AIA (NIOSH A Rules)*	0.12 to 0.40	0.27 to 0.85	0.46
Modified CRS (NIOSH B Rules)	0.11 to 0.29	0.20 to 0.35	0.25

*Under AIA rules, only fibers having a diameter less than 3 µm are counted and fibers attached to particles larger than 3 µm are not counted. NIOSH A Rules are otherwise similar to the AIA rules.

d. The B Rules have also been favorably received by analysts as less ambiguous and simpler to use; these rules also showed the least bias relative to AIA rules in the collaborative study. An independent NIOSH laboratory study using amosite fibers reported a relative standard deviation, including within- and between-sample variability, of 0.16 for the B Rules [16]. Another NIOSH study was conducted using field samples of asbestos [19]. This study indicated intralaboratory s_r in the range 0.17 to 0.25 and an interlaboratory s_r of 0.45. This agrees well with other recent studies [6,11,13].

e. Because of past inaccuracies associated with low fiber counts, the minimum recommended loading has been increased to 100 fibers/mm² filter area (80 fibers total count). This level should yield intracounter s_r in the range of 0.13 to 0.17 [4,8,16,19].

B. Interlaboratory Comparability:

At this time, there is no independent method for assessing the overall accuracy of this method. One measure of reliability is to estimate how well the count for a single sample agrees with the mean count from a large number of laboratories. The following discussion indicates how this estimation can be carried out based on measurements of the interlaboratory variability, as well as showing how the results of this method relate to the theoretically attainable counting precision and to measured intra- and interlaboratory s_r.

Theoretically, the process of counting randomly (Poisson) distributed fibers on a filter surface will give an s_r that depends on the number, N, of fibers counted:

$$s_r = 1/(N)^{1/2} \qquad (1)$$

Thus s_r is 0.1 for 100 fibers and 0.32 for 10 fibers counted. The actual s_r found in a number of studies is greater than these theoretical numbers [6,11,12,13].

An additional component of variability comes primarily from subjective laboratory-to-laboratory differences. In a study of ten counters in a continuing sample exchange program, Ogden [11] found this subjective component of intralaboratory s_r to be approximately 0.2 and estimated the overall s_r by the term:

$$\frac{(N + (0.2 \cdot N)^2)^{1/2}}{N} \qquad (2)$$

J-44

000225.155

Ogden found that the 90% confidence interval of the individual intralaboratory counts in relation to the means were +2 s_r and - 1.5 s_r. In this program, one sample out of ten was a quality control sample. For laboratories not engaged in an intensive quality assurance program, the subjective component of variability can be higher.

In a study of field sample results in 46 laboratories, the Asbestos Information Association [13] also found that the variability had both a constant component and one that depended on the fiber count. These results gave a subjective interlaboratory component of s_r (on the same basis as Ogden's) for field samples of ca. 0.45. A similar value was obtained for 12 laboratories analyzing a set of 24 field samples [19]. This value falls slightly above the range of s_r (0.25 to 0.42 for 1984-85) found for 80 reference laboratories in the NIOSH Proficiency Analytical Testing (PAT) program for laboratory-generated samples [12].

A number of factors influence s_r for a given laboratory, such as that laboratory's actual counting performance and the type of samples being analyzed. In the absence of other information, such as from an interlaboratory quality assurance program using field samples, the value for the subjective component of variability is chosen as 0.45. Note that, though based on at least two studies, this is a somewhat arbitrary choice. It is hoped that by the use of this number in the absence of other information, laboratories will carry out the recommended interlaboratory quality assurance programs to improve their performance and thus reduce the s_r.

The above relative standard deviations apply when the population mean has been determined. It is more useful, however, for laboratories to estimate the 90% confidence interval on the mean count from a single sample fiber count (Figure 1). These curves assume similar shapes of the count distribution for interlaboratory and intralaboratory results [11].

For example, if a sample yields a count of 24 fibers, Figure 1 indicates that the mean interlaboratory count will fall within the range of 227% above and 52% below that value 90% of the time. We can apply these percentages directly to the air concentrations as well. If, for instance, this sample (24 fibers counted) represented a 500-L volume, then the measured concentration is 0.02 fibers/mL (assuming 100 fields counted, 25-mm filter, 0.00785 mm^2 counting field area). If this same sample were counted by a group of laboratories, there is a 90% probability that the mean would fall between 0.01 and 0.08 fiber/mL. These limits should be reported in any comparison of results between laboratories.

Note that the s_r of 0.45 used to derive Figure 1 is used as an estimate for a random group of laboratories. If several laboratories belonging to a quality assurance group can show that their interlaboratory s_r is smaller, then it is more correct to use that smaller s_r. However, the estimated s_r of 0.45 is to be used in the absence of such information. Note also that it has been found that s_r can be higher for certain types of samples, such as asbestos cement.

Quite often the estimated airborne concentration from an asbestos analysis is used to compare to a regulatory standard. For instance, if one is trying to show compliance with an 0.5 fiber/mL standard using a single sample on which 100 fibers have been counted, then Figure 1 indicates that the 0.5 fiber/mL standard must be 213% higher than the measured air concentration. This indicates that if one measures a fiber concentration of 0.16 fiber/mL (100 fibers counted), then the mean fiber count by a group of laboratories (of which the compliance laboratory might be one) has a 95% chance of being less than 0.5 fibers/mL; i.e., 0.16 + 2.13 x 0.16 = 0.5.

J-45

000225.156

It can be seen from Figure 1 that the Poisson component of the variability is not very important unless the number of fibers counted is small. Therefore, a further approximation is to simply use +213% and -49% as the upper and lower confidence values of the mean for a 100-fiber count.

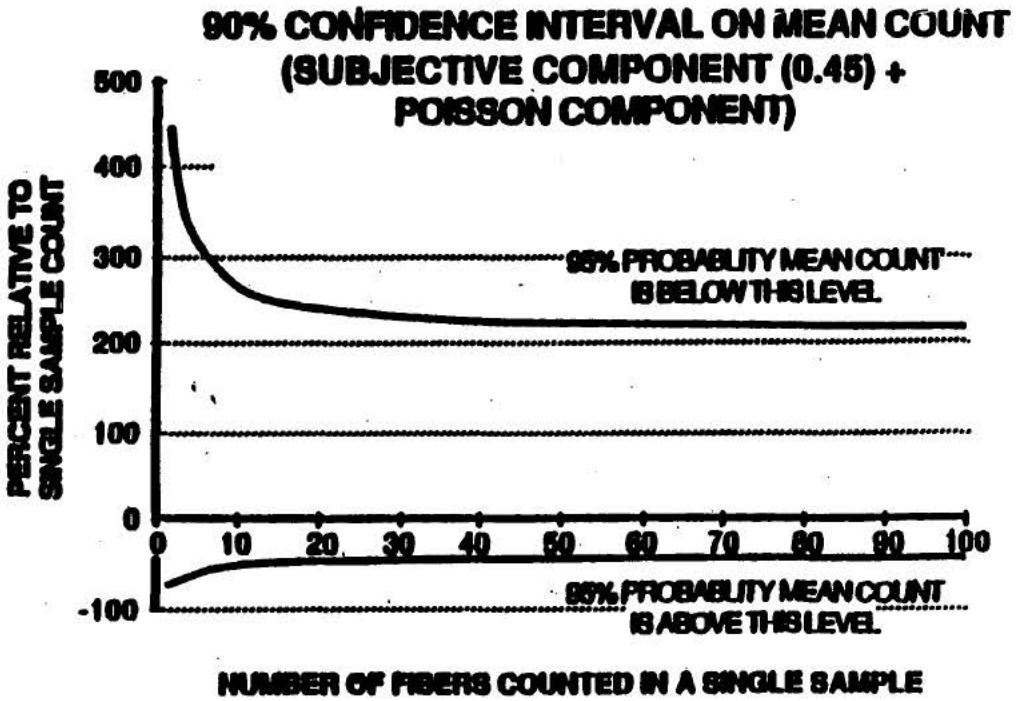


Figure 1. Interlaboratory Precision of Fiber Counts

REFERENCES:

[1] Occupational Safety and Health Administration, U.S. Department of Labor, Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite Asbestos; Final Rules, 29 CFR Part 1910.1001 Amended June 20, 1986.

[2] Revised Recommended Asbestos Standard, U.S. Department of Health, Education, and Welfare, Publ. (NIOSH) 77-169 (1976).

[3] Criteria for a Recommended Standard...Occupational Exposure to Fibrous Glass, U.S. Department of Health, Education, and Welfare, Publ. (NIOSH) 77-152 (1977).

[4] Leidel, N. A., S. G. Bayer, R. D. Zumwalde, and K. A. Busch. USPHS/NIOSH Membrane Filter Method for Evaluating Airborne Asbestos Fibers, U.S. Department of Health, Education, and Welfare, Publ. (NIOSH) 79-127 (1979).

[5] Baron, P. A. and G. C. Pickford. "An Asbestos Sample Filter Clearing Procedure," Appl. Ind. Hyg., 1:169-171, 199 (1986).

[6] Crawford, N. P., H. L. Thorpe, and W. Alexander. "A Comparison of the Effects of Different Counting Rules and Aspect Ratios on the Level and Reproducibility of Asbestos Fiber Counts," Part I: Effects on Level (Report No. TM/82/23), Part II: Effects on Reproducibility (Report No. TM/82/24), Institute of Occupational Medicine, Edinburgh, Scotland (December, 1982).

J-46

000225.157

[7] Rooker, S. J., N. P. Vaughn, and J. M. LeGuen. "On the Visibility of Fibers by Phase Contrast Microscopy," Amer. Ind. Hyg. Assoc. J., 43, 505-515 (1982).
[8] NIOSH Manual of Analytical Methods, 2nd ed., Vol. 1., P&CAM 239, U.S. Department of Health, Education, and Welfare, Publ. (NIOSH) 77-157-A (1977).
[9] Johnston, A. M., A. D. Jones, and J. H. Vincent. "The Influence of External Aerodynamic Factors on the Measurement of the Airborne Concentration of Asbestos Fibers by the Membrane Filter Method," Ann. Occup. Hyg., 25, 309-316 (1982).
[10 Asbestos International Association, AIA Health and Safety Recommended Technical Method #1 (RTMI). "Airborne Asbestos Fiber Concentrations at Workplaces by Light Microscopy" (Membrane Filter Method), London (1979).
[11] Ogden, T. L. "The Reproducibility of Fiber Counts," Health and Safety Executive Research Paper 18 (1982).
[12] Schlecht, P. C. and S. A. Schulman. "Performance of Asbestos Fiber Counting Laboratories in the NIOSH Proficiency Analytical Testing (PAT) Program," Am. Ind. Hyg. Assoc. J., 47, 259-266 (1986).
[13] "A Study of the Empirical Precision of Airborne Asbestos Concentration Measurements in the Workplace by the Membrane Filter Method," Asbestos Information Association, Air Monitoring Committee Report, Arlington, VA (June, 1983).
[14] Chatfield, E. J. Measurement of Asbestos Fiber Concentrations in Workplace Atmospheres, Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario, Study No. 9, 180 Dundas Street West, 22nd Floor, Toronto, Ontario, CANADA M5G 1Z8.
[15] Walton, W. H. "The Nature, Hazards, and Assessment of Occupational Exposure to Airborne Asbestos Dust: A Review," Ann. Occup. Hyg., 25, 115-247 (1982).
[16] Taylor, D. G., P. A. Baron, S. A. Shulman and J. W. Carter. "Identification and Counting of Asbestos Fibers," Am. Ind. Hyg. Assoc. J. 45(2), 84-88 (1984).
[17] Busch, K. A. and D. G. Taylor. "Statistical Protocol for the NIOSH Validation Tests," Chemical Hazards in the Workplace, Measurement and Control, ACS Symposium Series 149, American Chemical Society, Washington, DC (1981).
[18] Groff, Jensen. NIOSH PAT Coordinator, Private communication.
[19] Baron, P. A. and S. Shulman. "Evaluation of the Magiscan Image Analyzer for Asbestos Fiber Counting." Am. Ind. Hyg. Assoc. J., (in press).
[20] Sinclair, R. C. "Filter Mounting Procedure," NIOSH Publication Videotape No. 194 (1984 [updated 1986]).
[21] Keith, L. H., W. Crummett, J. Deegan, Jr., R. A. Libby, J. K. Taylor, and G. Wentler. "Principles of Environmental Analysis," Anal. Chem., 55:2210-2218 (1983).
[22] Jankovic, J. T., W. Jones, and J. Clere. "Field Techniques for Clearing Cellulose Ester Filters Used in Asbestos Sampling," Appl. Ind. Hyg., 1:145-147 (1986).

METHOD REVISED BY: James W. Carter, David G. Taylor, Ph.D., CIH, and Paul A. Baron, Ph.D., NIOSH/DPSE; based on the revised Method P&CAM 239 [2,4,8].

APPENDIX A: CALIBRATION OF THE WALTON-BECKETT GRATICULE:

Before ordering the Walton-Beckett graticule, the following calibration must be done to obtain a counting area (D) 100 µm in diameter at the image plane. The diameter, d_c (mm), of the circular counting area and the disc diameter must be specified when ordering the graticule.

1. Insert any available graticule into the eyepiece and focus so that the graticule lines are sharp and clear.
2. Set the appropriate interpupillary distance and, if applicable, reset the binocular head adjustment so that the magnification remains constant.

000225.158

J-47

3. Install the 40 to 45X phase objective.
4. Place a stage micrometer on the microscope object stage and focus the microscope on the graduated lines.
5. Measure the magnified grid length of the graticule, L_o (µm), using the stage micrometer.
6. Remove the graticule from the microscope and measure its actual grid length, L_a (mm). This can best be accomplished by using a stage fitted with verniers.
7. Calculate the circle diameter, d_c (mm), for the Walton-Beckett graticule:

$$d_c = \frac{L_a}{L_o} \times D.$$

Example: If L_o = 112 µm, L_a = 4.5 mm and D = 100 µm, then d_c = 4.02 mm.

8. Check the field diameter, D (acceptable range 100 µm ± 2 µm) with a stage micrometer upon receipt of the graticule from the manufacturer. Determine field area (acceptable range 0.00785 mm² ± 0.00032 mm²).

APPENDIX B: COMPARISON OF COUNTING RULES:

Figure 2 shows a Walton-Beckett graticule as seen through the microscope. Although the graticule incorporates the 3:1 aspect ratio, both the "A" and "B" rules will be discussed as they apply to the labeled fibers in the figure.

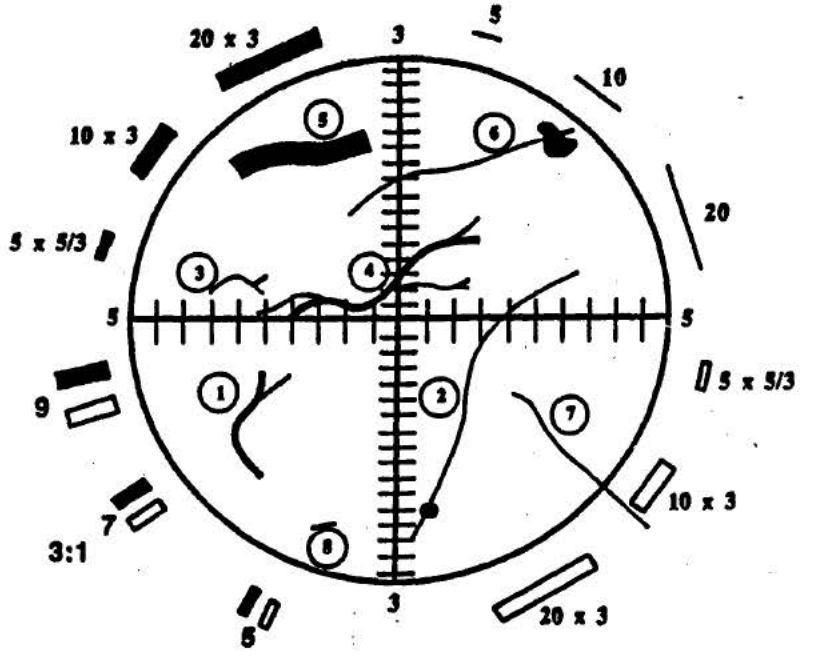


Figure 2. Walton-Beckett graticule with fibers.

J-48

000225.159

FIBER COUNT

Fiber	A Rules	B Rules	DISCUSSION
1	1 fiber	3 ends	(A)"A" rules do not allow for split ends; therefore, count one fiber. (B) Under 'B' rules, first detemine whether the fiber meets dimensional criteria, (i.e., >5 µm, >5:1 aspect ratio, <3 µm diameter). Next determine and count which two ends are the main trunk of the fiber. Finally, count all split ends >5 µm as one end. Fiber #1 is counted as 3 ends.
2	1 fiber	2 ends	(A) Single fiber with small particle attached. The particle is treated as if it does not exist by the "A" rules. (B) The particle is <3 µm diameter and therefore ignored under "B" rules.
3	1 fiber	2 ends	(A) As with Fiber 1, count one fiber under "A" rules because it meets the >3:1 aspect ratio, >5 µm criteria. (B) The split end is <5 µm long so it is not counted under "B" rules.
4	1 fiber	5 ends	(A) Fiber ends all attached to a central large fiber or bundle; therefore, count one fiber under "A" rules. (B) Count two ends as belonging to the main fiber. Three of the remaining four split ends are >5 µm, giving a total of 5 ends.
5	1 fiber	Do not count	(A) No diameter limit under "A" rules; therefore count this thick fiber because it meets the >3:1, >5 µm counting criteria. (B) The fiber is >3 µm diameter; therefore not counted under "B" rules.
6	1 fiber	1 end	(A) Ignore non-fibrous particulate matter under the "A" rules; count this as a whole fiber. (B) The short end of the fiber is <5 µm long and obscured by a particle >3 µm in diameter; therefore, not counted under "B" rules.
7	1/2 fiber	1 end	(A) Fibers which meet rules a.1. and a.2. and cross the graticule boundary are counted as 1/2 fiber under "A" rules unless the fiber crosses the graticule boundary more than once, in which case the fiber is not counted no matter how many ends lie within the graticule area. (B) Fiber ends lying inside the graticule boundary are counted as one end provided that the entire fiber meets rules b.1. and b.2. and each end is >5 µm. The portion of the fiber lying outside the graticule boundary must be considered in order to make this determination. Under "B" rules, it does not matter how often the fiber crosses the graticule boundary.
8	Do not count	Do not count	The fiber is <5 µm long.

J-48

000225.160

ATTACHMENT 4

NIOSH Method 7402

(8 pages)

FORMULA: various

M.W.: various

ASBESTOS FIBERS
METHOD: 7402
ISSUED: 8/15/87

OSHA: 0.2 asbestos fibers (>5 µm long/mL)
NIOSH: 0.1 asbestos f/mL [1]
ACGIH: 0.2 crocidolite; 0.5 amosite; 2 chrysotile and other asbestos, f/mL

PROPERTIES: solid, fibrous

SYNONYMS: actinolite asbestos [CAS #13768-00-8], grunerite asbestos (amosite) [CAS #12172-73-5], anthophyllite asbestos [CAS #17068-78-9], chrysotile asbestos [CAS #12001-29-5], crocidolite asbestos [CAS #12001-28-4], tremolite asbestos [CAS #14567-73 9].

SAMPLING

SAMPLER: FILTER
(0.8-to 1.2-µm cellulose ester membrane, 25-mm diameter; conductive cassette)

FLOW RATE*: 0.5 to 16 L/min (step 4)

VOL-MIN*: 400 L @ 0.1 fiber/mL (step 4)
-MAX*: (step 4)
*Adjust for 100 to 1300 fibers/mm² (step 4)

SHIPMENT: routine (securely packed to reduce shock)

SAMPLE STABILITY: stable

FIELD BLANKS: 10% (≥2) of samples

ACCURACY

RANGE STUDIED: 80 to 100 fibers counted

BIAS: not determined

OVERALL PRECISION (s_r): see EVALUATION OF METHOD

MEASUREMENT

TECHNIQUE: MICROSCOPY, TRANSMISSION ELECTRON (TEM)

ANALYTE: asbestos fibers

SAMPLE PREPARATION: modified Jaffe wick

EQUIPMENT: transmission electron microscope; energy dispersive X-ray system (EDS) analyzer

CALIBRATION: qualitative electron diffraction; calibration of TEM magnification and EDS system

RANGE: 100 to 1300 fibers/mm² filter area [2]

ESTIMATED LOD: 1 confirmed asbestos fiber above 95% of expected mean blank value

PRECISION: 0.28 when 65% of fibers are asbestos; 0.20 when adjusted fiber count is applied to PCM count [3].

APPLICABILITY: The working range is 0.04 to 0.5 fiber/mL for a 1-m³ air sample. The method measures asbestos fibers of the smallest diameter (<0.05 µm) but allows comparison of fiber counts to be made with phase contrast light microscopic (PCM) data when fiber diameters are rigidly defined.

INTERFERENCES: Non-asbestiform amphiboles may interfere in the TEM analysis if the individual particles have aspect ratios greater than 3:1. These interferences can only be eliminated by quantitative zone axis electron diffraction analysis. High concentrations of background dust interfere with fiber identification.

OTHER METHODS: NIOSH Method 7400 (dated 8/15/87) (phase-contrast microscopy) designed for use with this method.

J-51

000225.162

REAGENTS:

1. Acetone. See SPECIAL PRECAUTIONS.

EQUIPMENT:

1. Sampler: field monitor, 25-mm, three-piece cassette with ca. 50-mm electrically-conductive extension cowl, cellulose ester membrane filter, 0.8- to 1.2-µm pore size, and backup pad.
   NOTE 1: Analyze representative filters for fiber background before use. Discard the filter lot if mean count is >5 fibers/100 fields. These are defined as laboratory blanks.
   NOTE 2: Use an electrically-conductive extension cowl to reduce electrostatic effects on fiber sampling and during sample shipment. Ground the cowl when possible during sampling.
2. Personal sampling pump, ≥0.5 L/min (see step 4 for flow rate), with flexible connecting tubing.
3. Microscope, transmission electron, operated at 100 kV, with electron diffraction and energy-dispersive X-ray capabilities, and having a fluorescent screen with inscribed or overlaid calibrated scale (Step 15).
   NOTE: The scale is most efficient if it consists of a series of lines inscribed on the screen or partial circles every 2 cm distant from the center.
4. Diffraction grating replica with known number of lines/mm.
5. Slides, glass, pre-cleaned, 25- x 75-mm.
6. Knife, #10 surgical steel, curved-blade.
7. Tweezers.
8. Grids, 200-mesh TEM copper, carbon-coated.
9. Petri dishes, 15-mm depth. The top and bottom of the petri dish must fit snugly together. To assure a tight fit, grind the top and bottom pieces together with an abrasive such as carborundum to produce a ground-glass contact surface.
10. Foam, clean polyurethane, spongy, 12-mm thick.
11. Low-temperature oxygen plasma asher.
12. Filters, Whatman No. 1 qualitative paper or equivalent, or lens paper.
13. Vacuum evaporator.
14. Cork borer, No. 5 (8-mm).
15. Pen, waterproof, marking.
16. Reinforcement, page, gummed.
17. Asbestos standard bulk materials for reference.
18. Carbon rods, sharpened to 1 mm x 8 mm.
19. Microscope, light, phase contrast (PCM), with Walton-Beckett graticule (see method 7400).
20. Grounding wire, 22-gauge, multi-strand.

SPECIAL PRECAUTIONS: Acetone is extremely flammable (flash point = 0 °F). Take precautions not to ignite it. Heating of >1 mL acetone must be done in a fume hood using a flameless, spark-free heat source.

SAMPLING:

1. Calibrate each personal sampling pump with a representative sampler in line [4].
2. For personal sampling, fasten sampler to worker's lapel near worker's mouth. Remove the top cover from end of the cowl extension (open face) and orient sampler face down. Wrap joint between extender and monitor body with shrink tape to prevent air leaks. Where possible, especially at low %RH, attach sampler to electrical ground to reduce electrostatic effects during sampling.

J-52

000225.163

3. Submit at least two field blanks (or 10% of the total samples, whichever is greater) for each set of samples. Remove top covers from the field blank cassettes and store top covers and cassettes in a clean area (e.g., closed bag or box) during sampling. Replace top covers when sampling is completed.
4. Sample at 0.5 L/min or greater [5]. Adjust sampling rate, Q (L/min), and time, t (min), to produce fiber density, E, of 100 to 1300 fibers/mm² [$3.85 \cdot 10^4$ to $5 \cdot 10^5$ fibers per 25-mm filter with effective collection area (A_c= 385 mm²)] for optimum accuracy. Do not exceed ca. 0.5 mg total dust loading on the filter. These variables are related to the action level (one-half the current standard), L (fibers/mL), of the fibrous aerosol being sampled by:

$$t = \frac{A_c \cdot E}{Q \cdot L \cdot 10^9}, \text{ min.}$$

NOTE: The purpose of adjusting sampling times is to obtain optimum fiber loading on the filter. A sampling rate of 1 to 4 L/min for 8 hrs (700 to 2800 L) is appropriate in non-dusty atmospheres containing ca. 0.1 fiber/mL. Dusty atmospheres require smaller sample volumes (≤400 L) to obtain countable samples. In such cases take short, consecutive samples and average the results over the total collection time. For documenting episodic exposures, use high rates (7 to 16 L/min) over shorter sampling times. In relatively clean atmospheres, where targeted fiber concentrations are much less than 0.1 fiber/mL, use larger sample volumes (3000 to 10000 L) to achieve quantifiable loadings. Take care, however, not to overload the filter with background dust [5].

5. At the end of sampling, replace top cover and small end caps.
6. Ship samples upright with conductive cowl attached in a rigid container with packing material to prevent jostling or damage.
   NOTE: Do not use untreated polystyrene foam in the shipping container because electrostatic forces may cause fiber loss from sample filter.

SAMPLE PREPARATION:

7. Remove a circular section from any quadrant of each sample and blank filter using a cork borer [6].
8. Affix the circular filter section to a clean glass slide with a gummed page reinforcement. Label the slide with a waterproof marking pen.
   NOTE: Up to eight filter sections may be attached to the same slide.
9. Place the slide in a petri dish which contains several paper filters soaked with 2 to 3 mL acetone. Cover the dish. Wait 2 to 4 min for the sample filter(s) to fuse and clear.
   NOTE: The "hot block" clearing technique may be used instead of steps 8 and 9 [7,8].
10. Place the slide containing the collapsed filters into a low-temperature plasma asher. Etch at 100 °C for ca. 2 min at an O_2 pressure of 130 Pa (1 mm Hg) [9].
    NOTE: Plasma ashers may vary. Determine optimum etching time (ca. 1/2 the time needed to completely ash a filter) on blank filters before etching samples.
11. Transfer the slide to a rotating stage inside the bell jar of a vacuum evaporator. Evaporate a 1- by 5-mm section of a graphite rod onto the cleared filter(s). Remove the slide to a clean, dry, covered petri dish [6].
12. Prepare a second petri dish as a Jaffe wick washer with the wicking substrate prepared from filter or lens paper placed on top of a 12-mm thick disk of clean, spongy polyurethane foam [10]. Cut a V-notch on the edge of the foam and filter paper. Use the V-notch as a reservoir for adding solvent.
    NOTE: The wicking substrate should be thin enough to fit into the petri dish without touching the lid.

J-53

000225.164

13. Place the carbon-coated TEM grids face up on the filter or lens paper. Label the grids by marking with a pencil on the filter paper or by putting registration marks on the petri dish halves and marking with a waterproof marker on the dish lid. In a fume hood, fill the dish with acetone until the wicking substrate is saturated.
    NOTE: The level of acetone should be just high enough to saturate the filter paper without creating puddles.
14. Remove about a quarter section of the carbon-coated filter from the glass slide using a surgical knife and tweezers. Carefully place the excised filter, carbon side down, on the appropriately-labeled grid in the acetone-saturated petri dish. When all filter sections have been transferred, slowly add more solvent to the wedge-shaped trough to bring the acetone level up to the highest possible level without disturbing the sample preparations. Cover the petri dish. Elevate one side of the petri dish by placing a slide under it (allowing drops of condensed acetone to form near the edge rather than in the center where they would drip onto the grid preparation).

CALIBRATION AND QUALITY CONTROL:

15. Determine the TEM magnification on the fluorescent screen:
    a. Define a field of view on the fluorescent screen either by markings or physical boundaries.
       NOTE: The field of view must be measurable or previously inscribed with a scale or concentric circles (all scales should be metric) [10].
    b. Insert a diffraction grating replica into the specimen holder and place into the microscope. Orient the replica so that the grating lines fall perpendicular to the scale on the TEM fluorescent screen. Ensure that goniometer stage tilt is zero.
    c. Adjust microscope magnification to 10,000X. Measure the distance (mm) between the same relative positions (e.g., between left edges) of two widely-separated lines on the grating replica. Count the number of spaces between the lines.
       NOTE: On most microscopes the magnification is substantially constant only within the central 8 to 10 cm diameter region of the fluorescent screen.
    d. Calculate the true magnification (M) on the fluorescent screen:

$$M = \frac{X \cdot G}{Y}$$

       where: X = total distance (mm) between the two grating lines;
              G = calibration constant of the grating replica (lines/mm);
              Y = number of grating replica spaces counted
    e. After calibration, note the apparent sizes of 0.25 and 3.0 µm on the fluorescent screen. (These dimensions are essentially the diameter boundary limits for counting asbestos fibers by phase contrast microscopy.)
16. Measure 20 grid openings at random on a 200-mesh copper grid by placing a grid on a glass slide and examining it under the PCM. Use the Walton-Beckett graticule to measure the grid opening diameters. Calculate an average graticule field diameter from the data and use this number to calculate the graticule field area for an average grid opening.
    NOTE: A grid opening is considered as one graticule field.
17. Obtain reference selected area electron diffraction (SAED) or microdiffraction patterns from standard asbestos materials prepared for TEM analysis.
    NOTE: This is a visual reference technique. No quantitative SAED analysis is required [10]. Microdiffraction may produce clearer patterns on very small fibers or fibers partially obscurred by other material.
    a. Set the specimen holder at zero tilt.

J-54

000225.165

b. Center a fiber, focus, and center the smallest field-limiting aperture on the fiber. Use a 20-cm camera length and 10X binocular head. Obtain a diffraction pattern. Photograph each distinctive pattern and keep the photo for comparison to unknowns.

NOTE: Not all fibers will present diffraction patterns. The objective lens current may need adjustment to give optimum pattern visibility. There are many more amphiboles which give diffraction patterns similar to the analytes named on p.7402-1. Some, but not all, of these can be eliminated by chemical separations. Also, some non-amphiboles (e.g., pyroxenes, some talc fibers) may interfere.

18. Acquire energy-dispersive X-ray (EDX) spectra on approximately 5 fibers having diameters between 0.25 and 0.5 µm of each asbestos variety obtained from standard reference materials [10].

NOTE: The sample may require tilting to obtain adequate signal. Use same tilt angle for all spectra.

a. Prepare TEM grids of all asbestos varieties.

b. Use acquisition times (at least 100 sec) sufficient to show a silicon peak at least 75% of the monitor screen height at a vertical scale of ≥500 counts per channel.

c. Estimate the elemental peak heights visually as follows:

(1) Normalize all peaks to silicon (assigned an arbitrary value of 10).

(2) Visually interpret all other peaks present and assign values relative to the silicon peak.

(3) Determine an elemental profile for the fiber using the elements Na, Mg, Si, Ca, and Fe. Example: 0-4-10-3-<1 [10].

NOTE: In fibers other than asbestos, determination of Al, K, Ti, S, P, and F may also be required for fiber characterization.

(4) Determine a typical range of profiles for each asbestos variety and record the profiles for comparison to unknowns.

MEASUREMENT:

19. Perform a diffraction pattern inspection on all sample fibers counted under the TEM, using the procedures given in step 17. Assign the diffraction pattern to one of the following structures:

a. chrysotile;

b. amphibole;

c. ambiguous;

d. none.

NOTE: There are some crystalline substances which exhibit diffraction patterns similar to those of asbestos fibers. Many of these, (brucite, halloysite, etc.) can be eliminated from consideration by chemistry. There are, however, several minerals (e.g., pyroxenes, massive amphiboles, and talc fibers) which are chemically similar to asbestos and can be considered interferences. The presence of these substances may warrant the use of more powerful diffraction pattern analysis before positive identification can be made. If interferences are suspected, morphology can play an important role in making positive identification.

20. Obtain EDX spectra in either the TEM or STEM modes from fibers on field samples using the procedure of step 18. Using the diffraction pattern and EDX spectrum, classify the fiber:

a. For a chrysotile structure, obtain EDX spectra on the first five fibers; one out of ten thereafter. Label the range profiles from 0-5-10-0-0 to 0-10-10-0-0 as "chrysotile."

b. For an amphibole structure, obtain EDX spectra on the first 10 fibers; one out of ten thereafter. Label profiles ca. 0-2-10-0-7 as "possible amosite"; profiles ca. 1-1-10-0-6 as "possible crocidolite"; profiles ca. 0-4-10-3-<1 as "possible tremolite"; and profiles ca. 0-3-10-0-1 as "possible anthophyllite."

000225.166

NOTE: The range of profiles for the amphiboles will vary up to ±1 unit for each of the elements present according to the relative detector efficiency of the spectrometer.

c. For an ambiguous structure, obtain EDX spectra on all fibers. Label profiles similar to the chrysotile profile as "possible chrysotile." Label profiles similar to the various amphiboles as "possible amphiboles." Label all others as "unknown" or "non-asbestos."

NOTE: Fibers smaller than 0.2 µm in diameter may not produce sufficient peak heights to allow an elemental profile to be determined. Identify these fibers as "unknown".

21. Counting and Sizing:

a. Insert the sample into the specimen grid holder and scan the grid at zero tilt at low magnification (ca. 300 to 500X). Ensure that the carbon film is intact and unbroken over ca. 75% of the grid openings.

b. In order to determine how the grid should be sampled, estimate the number of fibers per grid opening during a low-magnification scan (ca. 1000X). This will allow the analyst to cover most of the area of the grid during the fiber count and analysis. Use the following rules when picking grid openings to count [10]:

(1) Light (<5 fibers per grid opening): count every grid opening in which the carbon film is intact.

(2) Moderate (5 to 25 fibers per grid opening): count every fifth grid opening. If the carbon film is damaged, proceed to the next available grid opening in which the film is intact.

(3) Heavy (>25 fibers per opening): count every tenth grid opening. If the carbon film is damaged, proceed to the next available opening in which the carbon film is intact.

c. Increase magnification to 10,000X. Begin counting at one end of the grid and systematically traverse the grid by rows, reversing direction at row ends. Count at least 2 field blanks per sample set to document possible contamination of the samples. Use the mean fiber count for the field blanks, B, in step 22. Count fibers and asbestos structures using the following rules:

NOTE: Microscopes which traverse nonlinearly or erratically, causing incomplete coverage of the grid opening are not suitable for asbestos analysis [11]. Before using a specific microscope for counting, it should be examined for accuracy and reproducibility of traverses.

(1) Count all particles less than 3 µm diameter which meet the definition of a fiber (aspect ratio ≥3:1, with parallel sides).

NOTE: Particles which are of questionable morphology should be analyzed by SAED and EDX to aid in identification.

(2) Size each fiber as it is counted and record the diameter and length (mm):

(a) Move the fiber to the center of the screen. Read the length of the fiber directly from the scale on the screen.

NOTE: For fibers which extend beyond the field of view, the fiber must be moved and superimposed upon the scale until its entire length has been measured.

(b) When a fiber has been sized, return to the starting point and continue the traverse to the next fiber.

(3) Record other asbestos structures according to the following morphological definitions. Label combinations of these structures according to the dominant quality.

(a) Bundle - compact arrangement of parallel fibers in which separate fibers or fibrils may only be visible at the ends or edges of the bundle.

NOTE: Asbestos bundles having aspect ratios of 3:1 or greater and less than 3 µm in diameter are counted as fibers.

J-56

000225.167

(b) Cluster - network of randomly-oriented interlocking fibers arranged so that no fiber is isolated from the group. Dimensions of clusters can only be roughly estimated and clusters are defined arbitrarily to consist of more than four individual fibers [10].

(c) Matrix - one or more fibers attached to or embedded in a non-asbestos particle.

(4) Count fibers which are partially obscured by the grid.

NOTE: If a fiber is partially obscured by the grid bar at the edge of the field of view, count it as a fiber greater than 5 µm only if more than 2.5 µm of fiber is visible. Otherwise, log the fiber as a "short" fiber, measuring only that portion which is visible.

(5) When counting is complete, calculate the asbestos fiber fraction shorter than 5 µm and thinner than ca. 0.25 µm (the number of asbestos fibers which would be undetected by phase contrast microscopy).

d. Size all fibers using the scale on the fluorescent screen.

NOTE: Data can be recorded directly off the screen in mm and later converted to µm by computer. Count and record identified asbestos fibers and structures >1 µm long of all diameters [11]. However, when comparing TEM data to the PCM counts, all fibers, regardless of identification, greater than 5 µm long and between 0.25 and 3.0 µm diameter which have aspect ratios of 3:1 or greater should be included. This size adjustment is necessary to test comparability of counts between the two methods. If the size-adjusted counts show reasonable equivalency, then further analysis using the small-fiber data will show what fraction of airborne asbestos fibers is being missed by the PCM method.

CALCULATIONS:

22. Calculate and report fiber density on the filter, E, by dividing the total fiber count F, minus the mean field blank count, B, by the number of fields counted, n, (for each sample), and the field area, A_f.

$$E = \frac{\left(\frac{F}{n_f} - \frac{B}{n_b}\right)}{A_f}, \text{ fibers/mm}^2$$

NOTE: The field area, A_f, is considered to be one grid opening, and the size may vary depending upon the type of grids used. This value is known from step 16.

23. Calculate and report the average concentration, C, (fibers/mL) of fibers in the air sample, V (L), using the effective collection area of the filter, A_c (385 mm² for a 25-mm filter):

$$C = \frac{(E)(A_c)}{V \cdot 10^3}$$

24. As an integral part of the report, give the model and manufacturer of the TEM as well as the model and manufacturer of the EDS system.

EVALUATION OF METHOD:

The TEM method has been shown to have a precision of 0.275 (s_r) in an evaluation of mixed amosite and wollastonite fibers. The estimate of the asbestos fraction, however, had a precision of 0.11 (s_r). When this fraction was applied to the PCM count, the overall precision of the combined analysis was 0.20 [3].

J-57

000225.168

REFERENCES:

[1] Revised Recommended Asbestos Standard, U.S. Department of Health, Education, and Welfare, Publ. (NIOSH) 77-169 (1976).

[2] Walton, W. H. "The Nature, Hazards, and Assessment of Occupational Exposure to Airborne Asbestos Dust: A Review," Ann. Occup. Hyg., 25, 115-247 (1982).

[3] Taylor, D. G., P. A. Baron, S. A. Shulman and J. W. Carter. "Identification and Counting of Asbestos Fibers," Am. Ind. Hyg. Assoc. J. 45(2), 84-88 (1984).

[4] Leidel, N. A., S. G. Bayer, R. D. Zumwalde, and K. A. Busch. USPHS/NIOSH Membrane Filter Method for Evaluating Airborne Asbestos Fibers, U.S. Department of Health, Education, and Welfare, Publ. (NIOSH) 79-127 (1979).

[5] Johnston, A. M., A. D. Jones, and J. H. Vincent. "The Influence of External Aerodynamic Factors on the Measurement of the Airborne Concentration of Asbestos Fibres by the Membrane Filter Method," Ann. Occup. Hyg., 25, 309-316 (1982).

[6] Zumwalde, R. D. and J. M. Dement. Review and Evaluation of Analytical Methods for Environmental Studies of Fibrous Particulate Exposures, NIOSH Technical Information Bulletin #77-204 (1977).

[7] Carter, J. W., D. G. Taylor, and P. A. Baron. NIOSH Analytical Method 7400, "Fibers," Revision #2 (August 15, 1987).

[8] Baron, P. A. and G. C. Pickford. "An Asbestos Sample Filter Clearing Procedure," Appl. Ind. Hyg., 1:169-171,199 (1986).

[9] Burdett, G. J. and A. P. Rood. "Membrane-Filter Direct-Transfer Technique for the Analysis of Asbestos Fibers or Other Inorganic Particles by Transmission Electron Microscopy," Environ. Sci. Tech. 17, 643-648 (1983).

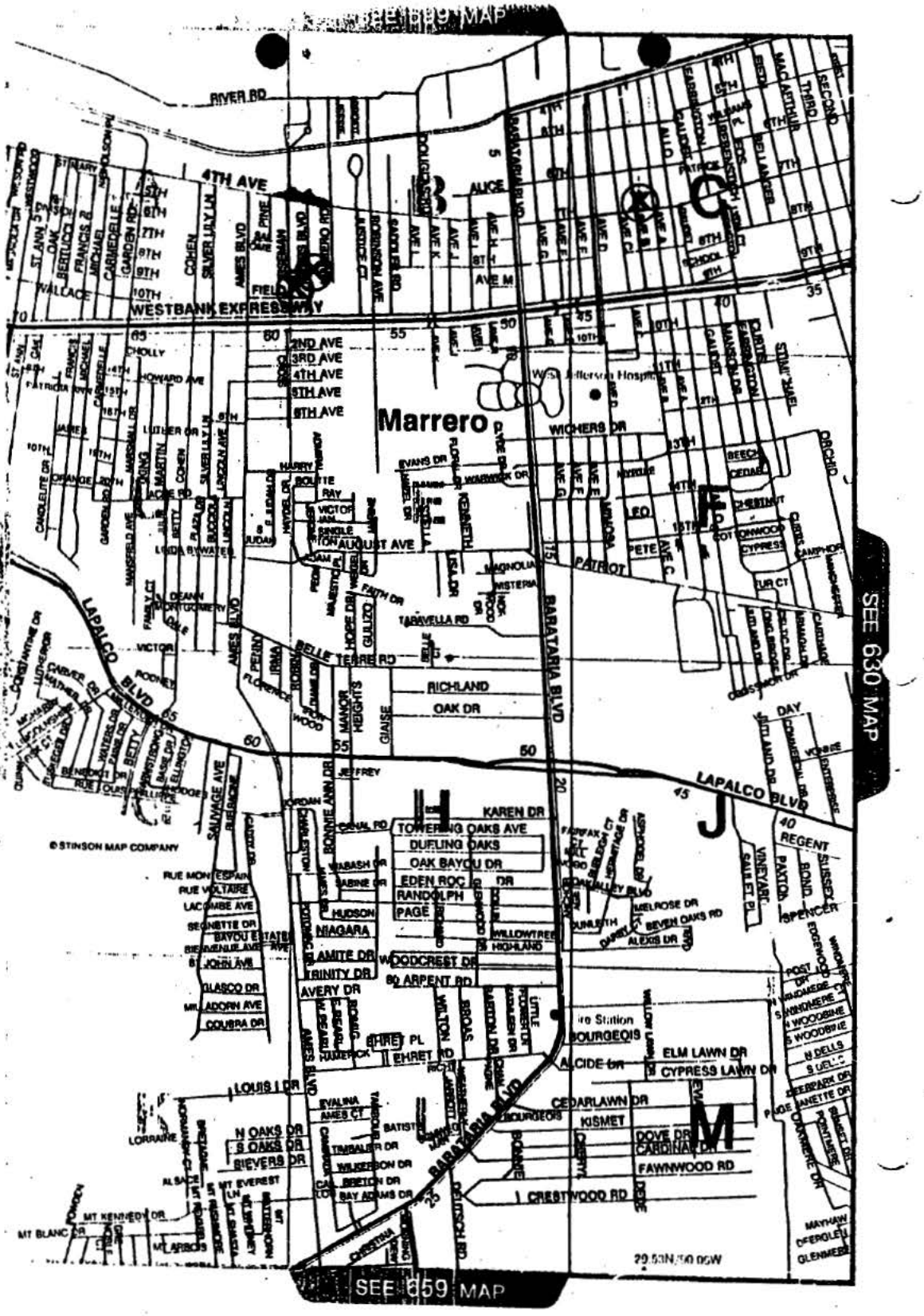
[10] Yamate, G., S. A. Agarwal, and R. D. Gibbons. "Methodology for the Measurement of Airborne Asbestos by Electron Microscopy," EPA Contract No. 68-02-3266 (in press).

[11] Steel, E. B. and J. A. Small. "Accuracy of Transmission Electron Microscopy for the Analysis of Asbestos in Ambient Environments," Anal. Chem., 57, 209-213 (1985).

METHOD WRITTEN BY: James W. Carter; Paul A. Baron, Ph.D.; and David G. Taylor, Ph.D.; NIOSH/DPSE.

J-58

000225.169


SEE 629 MAP
SEE 630 MAP
SEE 659 MAP
RIVER RD
4TH AVE
WESTBANK EXPRESSWAY
2ND AVE
3RD AVE
4TH AVE
5TH AVE
6TH AVE
Marrero
WICHERS DR
AUGUST AVE
PATRIOT
LAPALCO BLVD
BARATARIA BLVD
TERRE RD
RICHLAND
OAK DR
KAREN DR
TOWERING OAKS AVE
DUELING OAKS
OAK BAYOU DR
EDEN ROC DR
RANDOLPH
PAGE
NIAGARA
TRINITY DR
WOODCREST DR
ARPENT RD
AVERY DR
EHRET PL
EHRET RD
LOUIS I DR
N OAKS DR
S OAKS DR
BIEVERS DR
ELM LAWN DR
CYPRESS LAWN DR
CEDARLAWN DR
KISMET
DOVE DR
CARDINAL DR
FAWNWOOD RD
CRESTWOOD RD
REGENT
SPENCER
© STINSON MAP COMPANY
29.53N/90.05W

J-59

ecology and environment, inc.

QUALITY ASSURANCE SAMPLING PLAN ADDENDUM FORM

Site Name: West Bank Asbestos
TDD No: 06-9002-08 PAN: TLA0375SAA
Date of Original QASP: 03-02-90
Date of Amendment: 03-06-90

Changes and/or additional activities:

The information in the original QASP pertaining to the collection of asbestos bulk samples will not be applicable by descretion of John Martin OSC EPA Region VI.

Prepared by: Troy M. Naquin Date: 03-06-90

Reviewed by: _____ Date: _____

J-60

ATTACHMENT K
Copy of Original TDD# T06-9002-08 and Amendment A under Contract #68-01-7368
(3 Pages)

000225.172

1A. Cost Center: TS1313	TAT ZONE II CONTRACT CONTRACT NO. 68-01-7368 TECHNICAL DIRECTION DOCUMENT (TDD) ECOLOGY AND ENVIRONMENT, INC.	2. No.: 06-9002-08 T F90-1364
1B. Account No.: TLA0375SAA		Amendment

3A. Priority	4A. Estimate of [redacted]:	5A. EPA Site Name:	7. CERCLIS ID:
☑ High ☐ Medium ☐ Low	(b) (4) Total Costs: $100,000	WESTBANK ASBESTOS	N/A
		5B. SSID No.: N/A 5C. City/County/State: Marrero/Jefferson/LA	8. Completion Date: 7/15/90
3B. Key EPA Contact: Name: MARTIN Phone: x2275	4B. Overtime Approved: ☑ Yes ☐ No 4C. Non-dedicated Approved: ☒ Yes ☐ No	6. Source of Funds: ☒ CERCLA ☐ 311 ☐ UST ☐ Other	8A. Reference Info: ☐ Yes ☐ Attached ☒ No ☐ Pick-up

RECEIVED MAR 01 1990 E & E Baton Rouge

9. Type of Activity: AS SPECIFIED ABOVE

CWA-311	CERCLA		
☐ SPCC	☒ Site Assessment	☐ Special Project	☐ Quality Assurance
☐ On-Scene Monitoring	☐ Removal Funded	☐ Analytical Project	☐ Training
☐ Spill Clean-up Funded	☐ Removal PRP (AO/CO)	☐ Preparedness	☐ Program Management
	☐ On-Site Monitoring	☐ UST	☐ Technical Assistance
		☐ FEMA	☐ Information Management

10. General Task Description: Site Assessment of asbestos contaminated driveways, land fill and other areas in ~~the~~ Marrero, Westwego & Harvey, LA.

11. Desired Report Form:
- ☑ Formal Report
- ☐ Letter Report
- ☐ Formal Briefing
- ☐ Other (Specify)

12. Specific Elements:
1. Gather pertinent info from the State/Local authorites who had begun an investigation
2. Contact local gouverment to attain historic aerial photographs
3. Develope a Site Sampling Plan for air & bulk
4. Coordinate with State/Local authoritites to track all potential sites (location, area of asbestos, degree of threat, surroundings, etc.)
5. Locate a certified lab to analyze the samples
6. POLREPS, Photodocument, etc.
7. Consult with / brief OSC

13. Interim Deadlines:
1. 3/9/90

14. Authorizing DPO: J Chris Petersen (Signature)

15. Date: 2/16/90

16. Received by: ☒ Accepted ☐ Accepted with Exceptions (Attached) ☐ Rejected — (TATL Signature)

17. Date: 2/20/90

T007088

Distribution:

Sheet 1	White	- DPO Copy
Sheet 2	Blue	- TATL Copy
Sheet 3	Green	- ZPM Copy
Sheet 4	Canary	- PO Copy
Sheet 5	Pink	- CO Copy
Sheet 6	Goldenrod	- DPO Original (Unsigned by TATL)

Naquin
Baton Rge

K-1

1A. Cost Center: TS1313	TAT ZONE II CONTRACT CONTRACT NO. 68-01-7368 TECHNICAL DIRECTION DOCUMENT (TDD) ECOLOGY AND ENVIRONMENT, INC.	2. No.: T06-9002-08 F90-1364
1B. Account No.: TLA0375SAA		Amendment A

3A. Priority	4A. Estimate of Total Hours:	5A. EPA Site Name:	7. CERCLIS ID:
☐ High ☐ Medium ☐ Low	(b) (4) [redacted] Total Costs: 100,000	Westbank Asbestos	N/A
		5B. SSID No.: N/A 5C. City/County/State: Marrero/Jefferson/LA	8. Completion Date: 9/30/90
3B. Key EPA Contact: Name: Martin Phone: x2275	4B. Overtime Approved: ☒ Yes ☐ No 4C. Non-dedicated Approved: ☒ Yes ☐ No	6. Source of Funds: ☒ CERCLA ☐ 311 ☐ UST ☐ Other	8A. Reference Info: ☐ Yes ☐ Attached ☒ No ☐ Pick-up

9. Type of Activity:

CWA-311	CERCLA	AS SPECIFIED ABOVE	
☐ SPCC	☒ Site Assessment	☐ Special Project	☐ Quality Assurance
☐ On-Scene Monitoring	☐ Removal Funded	☐ Analytical Project	☐ Training
☐ Spill Clean-up Funded	☐ Removal PRP (AO/CO)	☐ Preparedness	☐ Program Management
	☐ On-Site Monitoring	☐ UST	☐ Technical Assistance
		☐ FEMA	☐ Information Management

10. General Task Description: Site Assessment of asbestos contaminated driveways, landfill and other areas in MARRERO, Westwego & Harvey, LA

11. Desired Report Form:
☒ Formal Report
☐ Letter Report
☐ Formal Briefing
☐ Other (Specify)

12. Specific Elements:

TDD amended to extend completion date

Original TDD specific elements:

1. Gather pertinent info from the state/local authorities who had begun an investigation
2. Contact local government to attain historic aerial photographs
3. Develop a Site Sampling Plan for air & bulk
4. Coordinate with State/Local authorities to track all potential sites (location, area of asbestos, degree of threat, surroundings, etc.)
5. Locate a certified lab to analyze the samples
6. POLREPs, Photodocumentation, etc.
7. Consult with/brief OSC

13. Interim Deadlines:
3. 03/09/90

14. Authorizing DPO: J Chris Petersen (Signature)

15. Date: 7/9/90

16. Received by: ☒ Accepted ☐ Accepted with Exceptions (Attached) ☐ Rejected (TATL Signature)

17. Date: 7/9/90

Distribution: Sheet 1 White DPO Copy; Sheet 2 Blue TATL Copy; Sheet 3 Green ZPM Copy; Sheet 4 Canary PO Copy; Sheet 5 Pink CO Copy; Sheet 6 Goldenrod DPO Original (Unsigned by TATL)

T007089

K-2

000225.174

TROY M. NAQUIN
Print Originator's Name
Ecology and Environment, Inc.

RECORD OF COMMUNICATION

Conversation with:

Name John Martin OSC
Address 1445 Ross Avenue
Dallas, TX 75202
Phone 214 - 655 - 2275
(Area Code) (Number)

Date 06 / 28 / 90
(Mo) (Day) (Year)
Time 1334 AM/PM
[✓] Originator Placed Call
[ ] Originator Received Call

TDD# 06-9002-08 PAN# TLA0375SAA

Subject WESTBANK ASBESTOS PROJECT

Discussion: TAT Naquin phoned EPA Region 6 OSC John Martin regarding the amendment of the Westbank Asbestos Technical Direction Document (TDD). OSC Martin approved amending the TDD for time of completion till the end of the TAT contract. In addition, TAT requested the QASP for the Westbank Asbestos Project be returned for revisions.

OSC Martin informed TAT that the next sampling mission for the Westbank may be conducted in early August.

Follow-Up-Action:

Originator's Signature: Troy M. Naquin

(RWG 6/90)

K-3

000225.175

ATTACHMENT L
Copy of TDD# T06-9010-54C and Amendments A, B, and C
(6 Pages)

1A. Cost Center: ZT1061	TAT ZONE II CONTRACT CONTRACT NO. 88-WO-0037 TECHNICAL DIRECTION DOCUMENT (TDD) ECOLOGY AND ENVIRONMENT, INC.	2. No.: T E06-9010-54 FY90-1364
1B. Account No.: ELA0375SAA		Amendment _____

3A. Priority	4A. Estimate of Total Hours:	5A. EPA Site Name:		7. CERCLIS ID:
☒ High ☐ Medium ☐ Low	(b) (4) [redacted] Total Costs: $56,000	Westbank Asbestos		N/A
		5B. SSID No.: N/A	5C. City / County / State: Marrero/Jefferson/LA	8A. Completion Date: 1/31/91
3B. Key EPA Contact: Name: Martin Phone: 655-2275	4B. Overtime Approved: ☒ Yes ☐ No	6. Source of Funds: ☐ Other _____ ☐ RCRA ☒ CERCLA ☐ 311		8B. Reference Info: ☐ Yes ☐ Attached ☒ No ☐ Pick-up

9. Type of Activity:

CWA - 311	CERCLA	AS SPECIFIED ABOVE	
☐ SPCC	☒ Site Assessment	☐ Special Project	☐ Quality Assurance
☐ On-Scene Monitoring	☐ Removal Funded	☐ Analytical Project	☐ Training
☐ Spill Clean-up Funded	☐ Removal PRP (AO/CO)	☐ Corp. Special Project	☐ Program Management
	☐ On-Site Monitoring	☐ Preparedness	☐ Technical Assistance
		☐ UST	☐ Information Management
		☐ FEMA	

10. General Task Description: Site Assessment of asbestos contaminated drive-ways, landfill and other areas in Marrero, Westwego & Harvey, LA

11. Desired Report Form:
☒ Formal Report
☐ Letter Report
☐ Formal Briefing
☐ Other (Specify)

12. Specific Elements:
1) Gather pertinent info from the state/local authorities who had begun an investigation
2) Contact local government to attain historic aerial photographs
3) Develop a Site Sampling Plan for air & bulk
4) Coordinate with state/local authorities to track all potential sites (location, areas of asbestos, degree of threat, surroundings, etc.)
5) Locate a certified lab to analyze the samples
6) POLREPs, photodocumentation, etc.
7) Consult w/brief OSC

RE: T06-9002-06

RECEIVED
OCT 18 1990

13. Interim Deadlines: N/A

14. Authorizing DPO: J Chris Petersen
Signature

15. Date: 10/1/90

16. Received by: ☒ Accepted ☐ Accepted with Exceptions (Attached) ☐ Rejected
TATL Signature

17. Date: 10/1/90

Distribution:
Sheet 1 White – DPO Copy
Sheet 2 Blue – TATL Copy
Sheet 3 Green – ZPM Copy
Sheet 4 Canary – PO Copy
Sheet 5 Pink – CO Copy
Sheet 6 Goldenrod – DPO Original (Assigned by TATL)

00270.PM3

Naquin/B.R.L-1

1A. Cost Center: ZT1061	TAT ZONE II CONTRACT CONTRACT NO. ~~68-01-7368~~ 68-W0-0037 TECHNICAL DIRECTION DOCUMENT (TDD) ECOLOGY AND ENVIRONMENT, INC.	2. No.: E06-9010-54 T FY90-1364 Amendment A
1B. Account No.: ELA0375SAA		

3A. Priority	4A. Estimate of Total Hours:	5A. EPA Site Name:	7. CERCLIS ID:
[X] High [ ] Medium [ ] Low	(b) (4) [redacted] Total Costs: $56,000	Westbank Asbestos	N/A
		5B. SSID No.: N/A 5C. City/County/State: Marrero/Jefferson/LA	8. Completion Date: 4/30/91
3B. Key EPA Contact: Name: Martin Phone: 655-2275	4B. Over-time Approved: [X] Yes [ ] No 4C. Non-dedicated Approved: [X] Yes [ ] No	6. Source of Funds: [X] CERCLA [ ] 311 [ ] UST [ ] Other	8A. Reference Info: [ ] Yes [ ] Attached [X] No [ ] Pick-up

9. Type of Activity:

CWA-311	CERCLA	AS SPECIFIED ABOVE	
[ ] SPCC	[X] Site Assessment	[ ] Special Project	[ ] Quality Assurance
[ ] On-Scene Monitoring	[ ] Removal Funded	[ ] Analytical Project	[ ] Training
[ ] Spill Clean-up Funded	[ ] Removal PRP (AO/CO)	[ ] Preparedness	[ ] Program Management
	[ ] On-Site Monitoring	[ ] UST	[ ] Technical Assistance
		[ ] FEMA	[ ] Information Management

10. General Task Description: Site Assessment of asbestos contaminated drive-ways, landfill and other areas in Marrero, Westwego & Harvey, LA

11. Desired Report Form:
[X] Formal Report
[ ] Letter Report
[ ] Formal Briefing
[ ] Other (Specify)

12. Specific Elements: TDD amended to extend completion date
Original TDD specific elements:

1) Gather pertinent information from the state/local authorities who had begun an investigation
2) Contact local government to attain historic aerial photographs
3) Develop a Site Sampling Plan for air and bulk
4) Coordinate with state/local authorities to track all potential sites (location, areas of asbestos, degree of threat, surroundings, etc.)
5) Locate a certified lab to analyze the samples
6) POLREPs, photodocumentation, etc.
7) Consult w/brief OSC

Re: T06-9002-08

RECEIVED
JAN 10 1991
E & E Baton Rouge

13. Interim Deadlines: N/A

14. Authorizing DPO: J. Chris Petersen (Signature)

15. Date: 1/8/91

16. Received by: [X] Accepted [ ] Accepted with Exceptions (Attached) [ ] Rejected
Chris Jones for K.F. (TATL Signature)

17. Date: 1/9/91 L-2

TROY M. NAQUIN
Print Originator's Name
Ecology and Environment, Inc.

RECORD OF COMMUNICATION

Conversation with:

Name John Martin - OSC EPA Region 6
Address 1445 Ross Avenue
Dallas, TX 75202
Phone 214 - 655 - 2275
(Area Code) (Number)

Date 01 / 07 / 91
(Mo) (Day) (Year)
Time 9:00 AM/PM
[ ] Originator Placed Call
[ ] Originator Received Call

TDD# E06-9010-54 PAN# ELA0375SAA

Subject WESTBANK ASBESTOS PROJECT

Discussion: TAT contacted OSC to amended Westbank TDD date which the final report is due 1-31-91. OSC agreed to amended the TDD till 4-30-91. In addition, OSC would like to conduct a site visit in March to possibly conduct a site assessment including air, bulk and personal sampling.

Follow-Up-Action:

Originator's Signature: Troy M. Naquin

(RWG 6/90)

1-3

1A. Cost Center: ZT1061	TAT ZONE II CONTRACT CONTRACT NO. 68-WO-0037 TECHNICAL DIRECTION DOCUMENT (TDD) ECOLOGY AND ENVIRONMENT, INC.	2. No.: E06-9010-54 T FY90-1364 Amendment B
1B. Account No.: ELA0375SAA		

3A. Priority	4A. Estimate of Total Hours:	5A. EPA Site Name:	7. CERCLIS ID:
☒ High ☐ Medium ☐ Low	(b) (4) [redacted] Total Costs: $56,000	WESTBANK ASBESTOS	N/A
		5B. SSID No.: N/A 5C. City / County / State: MARRERO/JEFFERSON/LA	8A. Completion Date: 7/31/91
3B. Key EPA Contact: Name: Martin Phone: 655-2275	4B. Overtime Approved: ☒ Yes ☐ No	6. Source of Funds: ☐ Other ☒ CERCLA ☐ OPA ☐ UST	8B. Reference Info: ☐ Yes ☐ Attached ☒ No ☐ Pick-up

9. Type of Activity:

OPA	CERCLA	AS SPECIFIED ABOVE	
☐ SPCC	☒ Site Assessment	☐ Special Project	☐ Quality Assurance
☐ On-Scene Monitoring	☐ Removal Funded	☐ Analytical Project	☐ Training
☐ Spill Clean-up Funded	☐ Removal PRP (AO/CO)	☐ Corp. Special Project	☐ Program Management
	☐ On-Site Monitoring	☐ Preparedness	☐ Technical Assistance
		☐ UST	☐ Information Management
		☐ FEMA	

10. General Task Description: Site Assessment of asbestos contaminated driveways, landfill and other areas in Marrero, Westwego & Harvey, LA

11. Desired Report Form:
☒ Formal Report
☐ Letter Report
☐ Formal Briefing
☐ Other (Specify)

12. Specific Elements: TDD amended to extend completion date
Original TDD specific Elements:
1) Gather pertinent information from the state/local authorities who had begun an investigation
2) Contact local government to attain historic aerial photographs
3) Develop a Site Sampling Plan for air and bulk
4) Coordinate with state/local authorities to track all potential sites (location, areas of asbestos, degree of threat, surroundings, etc.)
5) Locate a certified lab to analyze the samples
6) POLREPs, photodocumentation, etc.
7) Consult w/brief OSC
RE: T06-9002-08

RECEIVED
MAY 01 1991
E & E Baton Rouge

13. Interim Deadlines:
N/A

14. Authorizing DPO: J Chris Petersen
Signature

15. Date: 4/25/91

16. Received by: ☒ Accepted ☐ Accepted with Exceptions (Attached) ☐ Rejected
Chris Grime
TATL Signature

17. Date: 4/30/91

Distribution:
Sheet 1 White - DPO Copy
Sheet 2 Blue - TATL Copy
Sheet 3 Green - ZPM Copy
Sheet 4 Canary - PO Copy
Sheet 5 Pink - CO Copy
Sheet 6 Goldenrod - DPO Original (Unsigned by TATL)

00270.PM3

RLG

Nguin L-4

000225.180

Ron L Rooney Jarboe
Print Originator's Name
Ecology and Environment, Inc

RECORD OF COMMUNICATION

Conversation with:

Name John Martin

Address EPA
Dallas

Phone 214 - 655-2275
(Area Code) (Number)

Subject TDD Amendment

Date 4 / 24 / 91
(Mo) (Day) (Year)

Time 1105 AM/PM

[✓] Originator Placed Call

[ ] Originator Received Call

PROJECT# or CHARGE# or
TDD# 06-9010-054 PAN# ELA0 3755AA

Discussion: Need to amend -
How about end of July -
He thought that sounded reasonable

*Needs to coordinate travel with Bailey's

Follow-Up-Action:

Originator's Signature: Ron L Rooney Jarboe

(RWG 6/90)

L-5

000225.181

1A. Cost Center: ZT/061	TAT ZONE II CONTRACT CONTRACT NO. 68-WO-0037 TECHNICAL DIRECTION DOCUMENT (TDD) ECOLOGY AND ENVIRONMENT, INC.	2. No.: T06-9010-54
1B. Account No.: ELA0375SAA		Amendment C

3A. Priority	4A. Estimate of Total Costs:	5A. EPA Site Name:	7. CERCLIS ID:
☒ High ☐ Medium ☐ Low	(b) (4) [redacted] $56,000	Westbank Asbestos	N/A
		5B. SSID No.: N/A 5C. City / County / State: Marrero/Jefferson Par./LA	8A. Completion Date: 09/30/91
3B. Key EPA Contact: Name: Martin Phone: (504) 655-2275	4B. Overtime Approved: ☒ Yes ☐ No	6. Source of Funds: ☐ Other ☒ CERCLA ☐ OPA ☐ UST	8B. Reference Info: ☐ Yes ☐ Attached ☒ No ☐ Pick-up

9. Type of Activity:

OPA	CERCLA	AS SPECIFIED ABOVE	
☐ SPCC	☒ Site Assessment	☐ Special Project	☐ Quality Assurance
☐ On-Scene Monitoring	☐ Removal Funded	☐ Analytical Project	☐ Training
☐ Spill Clean-up Funded	☐ Removal PRP (AO/CO)	☐ Corp. Special Project	☐ Program Management
	☐ On-Site Monitoring	☐ Preparedness	☐ Technical Assistance
		☐ UST	☐ Information Management
		☐ FEMA	

10. General Task Description: Site Assessment of asbestos contaminated driveways, landfill and other areas in Marrero, Westwego & Harvey, LA.

11. Desired Report Form:
☒ Formal Report
☐ Letter Report
☐ Formal Briefing
☐ Other (Specify)

N/A

12. Specific Elements: TDD amended to extend completion date
Original TDD specific elements:
1) Gather pertinent information from the state/local authorities who had begun an investigation
2) Contact local government to attain historic aerial photographs
3) Develop a Site Sampling Plan for air and bulk
4) Coordinate with state/local authorities to track all potential sites (location, areas of asbestos, degree of threat, surroundings, etc.)
5) Locate a certified lab to analyze the samples
6) POLREPs, photodocumentation, etc.
7) Consult w/brief OSC
RE: T06-9002-08

13. Interim Deadlines: N/A

14. Authorizing DPO: Henry Thompson Jr. (Signature) — 15. Date: 7/29/91

16. Received by: ☒ Accepted ☐ Accepted with Exceptions (Attached) ☐ Rejected — Kisha [illegible] (TATL Signature) — 17. Date: 7/29/91

Distribution:
Sheet 1 White - DPO Copy
Sheet 2 Blue - TATL Copy
Sheet 3 Green - ZPM Copy
Sheet 4 Canary - PO Copy
Sheet 5 Pink - CO Copy
Sheet 6 Goldenrod - DPO Original (Unsigned by TATL)

00270.PM3

Naquin